



# APPENDIX

TO THE REPORT OF THE

# INTER-DEPARTMENTAL COMMITTEE

ON

# PHYSICAL DETERIORATION.

VOL. III.—APPENDIX AND GENERAL INDEX.

Presented to both Houses of Parliament by Command of This Majesty.



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# APPENDIX

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# PENSICAL DETERIORATION

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WOOLWICH, NEWCASTLE-ON-TYNE, MANCH		, LIVE	111 00.	u, DIM	MINGE			ELD,	EDI	INBURG	дН, (	GLASGO	W,	DUBLI	N, Al	ND E	BELFAST	r (Col.			RING	1901	AN	D 190	02.		,
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		ourers,	W	Workers,	tions	favourable ohysical	Shop	omen a	d	Profession	onal	Boys und	ler	Labou	rers,	Cloth	-Workers	tions	l in occupa favourabl	0	Shopmen	4	Profess	sional	Box	ys under	
CAUSES OF REJECTION.		Servants.	Worki	Makers, ng Tailors,	Carnen	pment (as		lerks.		Occupati Student	ons,	17 year	S.	Husband and Ser	dmen,	Lace Worki	e-Makers, ng Tailors	develo	physical opment (a ters,Smit	as l	and Clerks.		Occupa	ations,		years.	
			Shoen	akers, &c.	Mas	sons, &c.)		14.7				100				Shoer	nakers,&c.	Сатреп	ons, &c.)	LIS					1		
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de la companya de la	Number	Ratio pe 1000. Order of Prevalence	Numbe Rejected	Ratio pe 1000. Order o	Number Rejected	Ratio pe 1000. Order o	mber	Ratio pe 1000.	valer valer	Rejected Ratio per	der	Rejected Ratio pe 1000.	Order	Number Rejected Ratio per	Order Prevaler	Number Rejected	Ratio pe 1000. Order of	Number Rejected	Ratio p 1900. Order o	Prevalence Number Rejected	Ratio pe 1,000.	ralen	Rejected Ratio pe	1,000.	Number Rejected	Ratio per 1,000.	raler
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1. Syphilis	63	9	q	0	12	0	-	4																	-		7
2. Tubercle	12	2	7	6	7	4	9	0		1 12				85	10	12	8	16	9	6	6		2	15			
3. Impaired Constitution and Debility	81	11	27	23 9	15	9	9	12			1	- 05		14	2	8	5	5	3	4	4		1	8	2		
4. Other General Diseases	205	29	18	15	40	25	13	17		4 45		5 67	5		11	16	10	20	12	12	-3		2	15	5		.7
5. Diseases of Nervous System	7	1	2	2	2	1	10	11		4 47	5	2 27		149	18	43	27   8	42	25	27	29	9	6	46 7	3	21	
6. Weakness of Intellect	34	5	3	3	3	2	-							-	1	4	3	1		3	3		1	8	1		
7. Defective Vision	1029	143 1	73	62 5	178		83	108	9	12 141		1. 105		9	1	215	3	3	2							-	
8. Diseases of Eyes and Eyelids	40	6	22	19	11	7	3	100	0	12 141	2		1		32 3	215	134 3	209	123			3	18	137 2		1	1
9. Diseases of Nose and Mouth	48	7	3	3	3	2						1 13 27		44	5	2	1	5	3	12	13		3	23	3	1 3-1	
10. Disease of Ears	67	9	6	5	4	3	2	2						11	1	3	2			1	1				4	28	
11. Deafness	153	21	4	3	4	3		3	1		1	5 67	5	49	6	5	3	6	3	6	6		1	8	4	28	
12. Impediment of Speech	44	6	5	4	8	5	5	6		2 24			1	99	-	4	3	4	2	3	3				4	28	
13. Disease of Heart	446	62 6	60	51 6	95	59 6	46	60				0 105		37	5	6	4	14	8,	5	5		1	8	1	7	
14. Disease of Arteries (Aneurism)			1	1		00	-	00		4 47	5	8 107	Z	459	56 5	55	35 5	101	59	5 63	68	4	16	122 3	14	99	2
15. Disease of Veins (Varix)	498	69 5	26	22 10	59	37 9	28	36	7	2 95	9	1 13		311	38 9	24	00	1	1		4			1			
16. Disease of Lungs (except Tubercle)	36	5	6	5	5	3	2	3		2 90	9	1 15		911	38 9	34	22	75	44	7 40		7	10	76 5	1	7	
17. Loss or decay of many teeth	792	110 3	85	72 4	162	101 4	74	96	4	4 47	5	1		1311 1	61 1	060	170	8	5	11			2	15	1	7	
18. Hernia	252	35	26	22 10	1 1	34 10			10			6 80	3		30	268	170 2		200	1 156		2	23	176 1	8	57	4
19. Laxity of Abdominal Rings	16	2	3	3	5	3	1	1		0 00		0 00	3	99	9	24	15	42	25	26	28	10			3	21	
20. Hæmorrhoids	13	2			3	2	1	1		1 12				20	3	1	3	10	6								
21. Diseases of the Urinary Organs	6	1	2	2	1	1	1	1	13/					28	4	1	1	1	1	3	3				3	21	
22. Varicocele	332	46 7	48	41 7	98	61 5	33	43	6	5 59	4	4 53	10		40 8	43	27 8	71	40	0 41	1				1	7	
23. Other Diseases of the Genital Organs (not Syphilitic)	43	6	6	5	11	7	2	3					10	67	8	8	5	10	42	8 41		6	6	46 7	3	21	
24. Defects of Upper Extremities from Fracture, Contraction, Luxation, &c.	109	15	15	13	23	14	6	8		1 12		5 67	5		12	18	11	18	11	2							
25. Defects of Lower Extremities from Fracture, Contraction, Luxation, &c		43 8	3 44	37 8	73	46 8	17	22		1 12		6 80			43 6					10 14			4	31 9	-		
26. Flat Feet	287	40 10	19	16	75	47 7	22	29	8	1 12			5		37 10			67 96		9 28		8	7	53 6	9		3
27. Diseases of Joints	52	7	8	7	12	8	2	3							13	2	1	90	5	6 16	17		4	31   9	5	35	. 7
28. Other Affections of Bones and Muscles	22	3			8	5	3	4						30	4		-	9		4	4		1	. /	1	7	
29. Ulcers, Wounds, and Cicatrices	35	5	3	3	11	7	8	10						68	8	11	7	17	3 10	9	1			-		1 3	
30 Other Affections of the Cutaneous System	71	10	10	8	18	11	5	6	-	3 35	9	3 40			13	19		16		12					1	1	
31. Malformation of Ears	1				117				-					2		10	12	10	9	12	13	7 -	1	8	1	7	
32. Malformation of Nose and Mouth	3	1 1				7				11/2		1		2				1					-				
33. Malformation of Chest and Spine	117	16	13	11	22	14	19	25	9	3 35	9	1 13		138	17	8	5	26	1		7						
34. Malformation of Urinary or Genital Organs	13	2	1	1	2	1								14	2	1	1	26			8		2	15	6	43	(
35. Under Height	295	41 9	136	115 3	31	19	8	10	3 1	4 47	5				40 7	49	31	7 40	3 23	2					2	14	1
36. Under Chest Measurement	994	138 2	189	160 2	327	205 1	246	320	1	22 259	1	5 67	5		161 2	424		1 258		2 200			7.00	100	3	21	
37. Under Weight	503	70 4	288	244 1	206	129 2	90	117	2	6 71					86 4	166				2 200		1	16	122	3 4	28	
38. Apparent Age not in accordance with Regulations	87	12	7	6	7	4	6	8		3 35				109	13	7		4 109		4 6		4	3	23	1	7	1
39. Not likely to become an Efficient Soldier	71	10	4	3	3	2	9	12		2 24		2 27		59	7	13		8	5		5 5		1	8	1	7	1
40. Over Height	5	1		14			1 2 3	-		46 76				10	1	13	8	3	2		5 5		1	8	5	35	- "
				1 - 1			-							10		7.		1	1		-						
Totals	7193	1000	1179	1000	1599	1000	769	1000	1	85 1000		75 1000		8139 1	000	1570	1000	720	1000								-
173—Ap.									3.1			2000		0100 1	000	1573	1000	1704	1000	93	1 1000		131	1000	142	2 1000	-

The state of the state of the state of the			MECHANISM OF RECRUITS REJECTED	ON INSPECTION, SHOWING CAUSE C			The state of the s	RATIO REJECTED PER 1,000 INSPECTED.	
	LABOURERS, HUSBANDMEN, AND SERVANTS.	TRADES, SUCH AS CLOTH WORKERS, WEAVERS LACE MAKERS, WORKING TAILORS, SHOEMAKERS, BAKERS, ETC.	MECHANICS EMPLOYED IN OCCUPATIONS FAVOURABLE TO PHYSICAL DEVELOPMENT AS CARPENTERS, SMITHS, MASONS, ETC.	SHOPMEN AND CLERKS.	PROFESSIONAL OCCUPATIONS, STUDENTS.	BOYS UNDER 17 YEARS.	TOTALS.	ACATO RESIDENCE PER 1,000 INSTRUMENT.	
CAUSES OF REJECTION.	, George's Barrecks, London. London.  olwich.  sweedle on Tyne anchester.  verpool.  ranigham.  chiehd.  finourgh.  ingove.	aliast. Georges i Barrachs, London.  roadsow.  roadsow.  reache con-flyne.  receptod.  reliable.  reliable.	st. t. crays.  Actions of the control of the contro	Se, George Barracks, London. Houselow. Woolwish. Mandnester. Liverpool. Birninglam. Lichledd. Editherigh. Glasgow. Dublin.	St George's Barracks, London, Houndon, Houndon, Houndon, Newsastle-on-Tyrne, Newsastle-on-Tyrne, Barrathgham, Lichdeld, Edintungh, Ghagow, Dahlin, Belintungh, Bel	St. Georga, - Barrecks, London. Woodwie. Woodwie. Woodwie. Mandbester. Liverpool. Likerpool. Lichiteda. Birninghan. Lichiteda. Birninghan.	St. Georgie's Rarnacks, London.  Woalwich.  Wesventheou-Tyne.  Manchester.  Liverpool.  Birmingham.  Lichfield.  Edinburgh.  Glasgow.  Publin.  Relinest.	St. George's Burneks, London, Humslow, Woolvich, Neweastle-ou-Tyne. Liverpool. Birninghan. Lishtifeld. Edinlungh. Glasgow. Dubhn. Belfast.	CAUSES OF REJECTION.
Syphilis     Tubercle     Impaired Constitution and Debility	X   X   X   X   X   X   X   X   X   X	3 2 1 3 2 2 5 2 1 1 3 2 1 1 1 1 1 1 1 3 6			1 2	4 1	21     12     15     27     3     1     3     3     2       2     1     1     1     13     8     2       13     2     11     5     1     1     50     17     1     13     2       50     2     3     1     151     7     3     19     4		1. Syphilis. 2. Tubercle. 3. Impaired Constitution and Debility. 4. Other General Diseases.
4. Other General Diseases 5. Diseases of Nervous System 6. Weakness of Intellect 7. Defective Vision	3 4 1 1 1 1 1 1 1 359 68 37 39 228 72 22 3 26 20 109	33 1 1 13 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 4 10 4 10 4 10 4 10 4 10 4 10 1 1 1 1	28 1 3 30 1 2 3 4 7 4	8 1 1 1	8 3 2 1	3 4 5 2 1 1 1 5 4 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	37 41 31 25 85 48 16 8 27 22 66 35	Diseases of Nervous System.     Weakness of Intellect.     Defective Vision.     Diseases of Eyes and Eyelids.
S. Diseases of Eyes and Eyelids  Diseases of Nose and Mouth  D. Disease of Ear  L. Deafnes  C. Disease of Spacely  Deafnest of Spacely	139 2 2 4 1 3 1	5 1 2 1 1 1 1 1 1 2 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1 1 1 1 2 1	1	2 2 1	2	2 2 1 1 2 2	30 3 8 8 5 4 1 1 1 143 2 3 4 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 2 3 3 3 12 21 13 22 35 14 20 6 24 14 11 58	9. Diseases of Nose and Mouth. 10. Disease of Ears. 11. Deafness. 12. Impediment of Speech. 13. Disease of Heart.
12. Impediment of Speech 13. Disease of Heart 14. Disease of Arteries (Aneuriam) 15. Disease of Veins (Varix) 16. Disease of Lungs (except Tubercle)	98 25 16 36 99 24 22 5 26 13 17 326 10 7 19 49 24 4 6 8 10 4 2 1 14 3 3 2 2 1	31 5 1 1 1 6 2 7 1 1 10 2 2 2	2 1 2 1 1	14 1 2 3 2 2 2 1 1	2	1	369 13 10 23 63 28 7 8 25 21 6 4 3 1 18 3 6 2 1 1 1 322 10 6 16 187 246 153 11 34 64 44 5	2 30 7 6 12 16 13 4 6 16 9 4 24 4 26 5 4 8 47 117 79 8 21 28 22 14	Disease of Arteries (Aneurysm).     Disease of Veins (Varix).     Disease of Lungs (except Tubercle).     Loss or decay of many teeth.
17. Loss or decay of many teeth  18. Hernia  19. Laxity of Abdominal Rings  20. Hemorrhoids		15 3 1 2 5 4 1 4 3 1	1 1 2 1	8 3 1 2 2 1 1 1 1 1 1 1	3	4 1	144     9     16     26     63     15     30     8     26     2     5       4     3     2     6     2     1     1     3     2       7     3     1     1     2     1     3     3       1     1     2     2     1       167     28     12     18     56     31     38     8     38     15     7     16	1 12 5 9 13 16 7 15 — 5 11 1 12 1	Laxity of Abdominal Rings.     Hiemorrhoids.     Diseases of the Urinary Organs.
21. Diseases of the Urinary Or <sub>6</sub> ans 22. Varicocele 23. Other Diseases of the Genital Organs (not Syphilitic) 24. Defects of Upper Extremities, from Fracture, Contraction, Luxation, &c 25. Defects of Lower Extremities, from Fracture, Contraction, Luxation, &c	118 18 6 13 39 23 20 7 16 6 4 3 3 18 3 4 3 6 3 3 18 5 18 5 10 1	6 3 1 3 1 4 8 6 7 7 2 3	2 3 1 1 6 6 4 1 1 4 2 1 3 8 3 2 1 1 5 13 7 12 8 23 3	5 17 2 2 2 3 1 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1	1 2 1 1 1 1 1 1 4 1 2 1	7 4 20 5 4 3 14 3 8 3 11 23 21 7 3 6 11 21 1 105 28 10 45 81 53 36 25 4 50 1	5 4 3 2 7 12 5 3 2 4 7 9 — 8	23. Other Diseases of the Genital Organs (not Syphilitie).  24. Defects of Upper Extremities from Fracture, Contraction, Luxation, &c.  25. Defects of Lower Extremities from Fracture, Contraction, Luxation, &c.
26. Flat Feet 27. Diseases of Joints 28. Other affections of Bones and Muscles 29. Uloers, Wounds, and Cicatrices	48     13     2     8   131   16   14   5   6   12   2       1     2     30     4     12       4     1     7     1     2     2     3     1       12     2     4     7     4     1     1     1	30 3 4 4 3 4 3 4 3 4 2	1 5 3 1 3 18 0 13 3 1 1 6 1 1 1 1 1 1 5	3 1 1 2 8 1 1 2 1 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1	1 2 3	1 2	2 5 36 5 1 1 1 1 15 7 1 9 1 3 2 2 1 52 7 16 8 7 6 10 4	8 1 10	Diseases of Jointa.     State Affections of Bones and Muscles.     Ulcers, Wounds, and Cicatrices.     Other Affections of the Cutaneous System.
30. Other Affections of the Cutaneous System 31. Malformation of Ear 32. Malformation of Nose and Mouth 33. Malformation of Chest and Spine	35 6 11 6 5 5 3 1 1 2 50 4 1 18 8 3 9 6 5 3 5	5 2 3 3 1 2 1		1 3 9 1 3 2		1	11 2 3	8 5 4 1 14 4 2 6 5 4 4 3 4 4 3 8 25 15 2 7 9 6 1 1 9 6 1 2 6	34. Malformation of Urinary or Genital Organs.
34. Malformation of Urinary or Genital Organs 35. Under Height 36. Under Chest Measurement 37. Under Weight 38. Apparent Age not in accordance with Regulations	163 68 2 76 103 32 6 16 2 5 14 16 14 14 13 5 2 1 8	72 100 7 8 4 8 9 3 12 11 16 1 30 218 9 7 1 9 5 16 3 3 2 1 2 5	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	7 4 1	3 17 1 2 1 6 6 6	1 1 2	2 607 113 147 57 424 74 42 109 35 40 37	07 49 60 87 30 106 35 22 77 22 18 19 6 63 48 46 1 47 27 22 6 16 23 6 7 3	2 36. Under Chest Measurement. 37. Under Weight. 38. Apparent age not in accordance with Regulations. 39. Not likely to become an efficient soldier.
. 39. Not likely to become an Efficient Soldier  40. Over Height  Total Number Rejected	4 1 10 49 2 5 1 1 1 2406408 275 493 1489 552/247 202 177 171 266	512 526 51 30 33 116 67 40 61 93 54 33	5 75 499 47 35 83 234 102 163 33 48 176 28 15	51 395 20 27 11 129 17 9 9 37 38 37 4	40 56 5 1 1 7 1 6 1 2	5 26 10 14 - 9 - 5 - 1 5 1	1 1 1 1 4 3908 536 382 621 1984 739 470 305 356 445 367	787	40. Over Height.  Total Number Rejected.
Total Number Inspected	7028 1279 1106 1492 2808 1561 1027 897 679 886 1304	1070 1688 270 128 76 301 203 136 262 407 223 238	176 1484 154 215 297 541 280 697 190 280 942 117 34	12 1186 106 96 29 270 94 30 43 206 173 200 10	00 328 12 6 9 26 3 32 5 12 5 21	15 578 77 139 25 44 8 24 18 20 38 108	15 12292 1898 1690 1928 3990 2149 1946 1415 1604 2267 1989	718	Total Number Inspected.
Total Number Inspected  Ratio of Rejections per 1000 inspected	342 315 249 330 530 354 241 225 261 193 204	479 312 189 234 434 385 330 294 233 229 242 133	8 426 336 305 163 279 433 364 234 174 171 187 239 44	12 333 189 281 379 478 181 300 209 180 220 185 40	00 171 417 167 111 269 333 188 — — 200 95 :	333 45 130 101 - 205 - 208 - 50 132 9	267 318 282 226 256 497 344 242 216 222 196 185	458	Ratio of Rejections per 1,000 inspected.
tatio of resections per 1000 inspected									A 2

			N, SHEWING CAUSE OF REJECTION, ACC	CORDING TO PREVIOUS OCCUPATIONS, AT THE UNDERMENTIONED	RECRUITING STATIONS DURING 1902.	
	LABOURERS, HUSBANDMEN, AND SERVANTS.	TRADES, SUCH AS CLOTH-WORKERS, WEAVERS, LACE MAKERS, WORKING TAILORS, SHOEMAKERS, BAKERS, ALCE TO PHYSICAL DEVELOPMENT (AS CARPENTERS, SMITHS, MASONS, ETC.)	SHOPMEN AND CLERKS.	Professional Occupations, Students. Boys under 17 Years.	TOTAL. RATIO REJEC	TED PER 1,000 INSPECTED.
CAUSES OF REJECTION.	SirZeograf Barracks, Donlon, Houndow, Woodwidth. Novenatie on Tyne. Manchester. Licherpool. Lichidadi. Edinburgh. Edinburgh. Boldin.	Se Chengae Barinda, London. Hammloow Woodwich. Newtenstle on Tyme. Marchaeter. Lifverpool. Beriningham. Lichited. Chinaryab. Glaegow. Duhlm. Beffast. Se George's larricka, Beriningham. Lichited. Bundon. Belfast. Beriningham. Lichited. Beriningham. Beffast. Beriningham. Lichited. Beriningham. Lichited. Beriningham. Liverpool. Liverpool. Liverpool. Beriningham. Liverpool. Liverpool. Beriningham. Duhlm. Beriningh. Beriningham. Duhlm. Beliningh. Beliningh. Beliningh. Beliningh. Beliningh.	St. tienges is Berrades London Hombow Rocawith on Tyne Marchaster Lichfand Berrades Effiningham Glasgow Glasgow Followigh Glasgow Followigh Follow	Woodwich Woodwich Manchenger Manchenger Manchenger Manchenger Manchenger Manchenger Birtunghan Loblingh Glasgow St.George-Berneich Humshow Woodwich Newendeen Tyre. Mancheser Liverron Mancheser Liverron Mancheser Liverron Edebteid. Berningham	Dublin.  Patient St. George, Barracks, George, Barracks, George, Barracks, Louisier Manclineter Haminglain.  Edinburgh.  Blangow. Dublin.  Blangow.  Condon.  Red Georges, Barracks, Red Georges, Red Georges, Barracks, Red Georges, Barracks, Red Georges,	CAUSES OF REJECTION.
1. Syphilis	22 5 11 13 19 2 1 3 1 2 4 2	2 2 1 7 1 1 1 1 2 9 1 1 1 1	3 1 1 1 1	2	23 7 12 16 40 3 2 3 1 3 6 5	1. Syphilis.
2. Tubercle · · · · · · · · · · · · · · · · · · ·	3 3 1 3 1 2 1		3 1		4 1 3 15 3 8 2 5 1	2. Tubercle.
Impaired Constitution and Debility     Other General Diseases	9   5 3 3 3 3 3 6 6 1 20		2 1 1 5 1 2	1 1 1 1	14 3 1 12 7 3 5 55 8 5 21	3. Impaired Constitution and Debility.
5. Diseases of Nervous System	1 2 2 1 1	10 5 2 26 1 1 1 4 3 2 2 6 19 4 4 2 3	6 8 1 7	2 1 2	55 24 14 10 7 10 2 6 24 18	4. Other General Diseases.
6. Weakness of Intellect	3 1 3 1				1 3 2 7 1 1	5. Diseases of Nervous System.
	414 42 36 50 211 61 35 18 19 44 76 65	65   25   11   2	37 3 7 1 31 4 2 4 1 6 27 3 9	1 2 3 3 3	1 541 66 57 66 451 81 75 36 23 74 124 82 42 41 32 33 101	6. Weakness of Intellect.
8. Diseases of Eyes and Eyelids	14 2 10 2 10 1 1 3 1		3 3 1 2 2 1	3 2 1	18 3 6 10 6 13 1 1 6 5 5	37 - 50 20 10 30 51 57 7. Defective vision.  8. Diseases of Eyes and Eyelids.
9. Diseases of Nose and Mouth	2 3 3 1 1 1	1 2	1	2 2	, 4 4 7 1 1 1 1	9. Diseases of Nose and Mouth.
		3 1 1 3 1 1 1	2 2 2	1 1 3	27 4 7 2 2 1 21 1 2 4	10. Disease of Ears.
11. Deafness	44 1 3 2 1 1 2 1		1 2	1 1 2	47 2 8 1 3 2 1 1 3 1 1	11. Deafness.
	16 3 3 7 2 1 5		2 1 1 1 1		28 6 6 11 2 2 5 4	12. Impediment of Speech.
13. Disease of Heart  14. Disease of Arteries (Aneurism)	1157 21 19 71 35 20 12 26 4 19 23 52	02 14 2 2 5 3 3 5 6 21 20 7 17 11 10 11 17 2 3	20 2 4 8 6 7 2 3 5 11 2 8	1 1 7 4 1 1	1 235 33 31 91 56 25 30 43 4 38 42 80 18 20 17 45 13	
	135 5 14 12 48 28 33 2 3 3 10 18	18 9 1 1 13 1 1 3 5 24 1 2 9 14 4 14 1 3 1 1 1	19 2 6 4 2 2 1 3 1 8	2 1 1 1 1		14. Disease of Arteries (Ancurism).
	1 2 2 1 7 1 3 2		2 4 1 2 1 1		195 7 20 21 83 36 50 6 6 5 17 25 15 4 11 10 19 3 2 7 2 13 2 2 1 8 3 3 1	
	351 49 84 147 212 225 55 4 53 46 63 22	22 29 6 4 149 14 20 2 15 7 14 8 37 9 3 17 88 57 50 5 9 52 9 5	51 1 7 30 22 11 3 2 8 17 4 5	1 3 13 1 5 1 1	474 65 98 164 480 325 149 14 81 114 103 39 37 40 54 82 107	16. Disease of Lungs (except Tubercle).
18. Hernia	139 8 11 15 20 8 7 5 1 7 7 14		17 1 2 1 1 2 2 1	3	180 11 16 20 35 8 14 9 2 16 9 17 14 7 9 10 8	4 5 6 1 8 4 12 18. Hernia.
19. Laxity of Abdominal Rings		3 1 1 3 2 2 1 2 2			4 4 5 10 5 1 3 3 3	19. Laxity of Abdominal Rings.
	3 2 1 2		1 2	3	7 4 2 2 1	20. Hæmorrhoids.
	14 4 3 1 6		28 4 1 1 1 1 1 4 2 5		16 4 1 3 1 1 10	21. Diseases of the Urinary Organs.
	203 7 23 10 16 2 6 4 11 3 12 25 34 1 3 7 5 11 1 3 2	20 22 2 3 5 1 4 1 7 2 1 1 1 3 2 2 1 8			290 13 36 15 29 7 7 7 22 7 22 31 22 8 20 7 6	
23. Other diseases of the Genital Organs (not Syphilitic) 24. Defects of Upper Extremities from Fracture, Contraction, Luxation, &c.			2 1 1 2 2 4 1 1 3		36 2 3 10 12 15 1 1 3 12 50 8 8 6 57 10 1 7 3 12	23. Other Diseases of the Genital Organs (not Syphilitic).
25. Defects of Lower Extremities from Fracture, Contraction, Luxation, &c.			16 4 1 2 4 1 3	1 3 3 2 1	172 37 36 12 74 74 37 99 1 34 1 6 13 93 96 8 17	6 2 5 1 10 1 10 24. Defects of Upper Extremities from Fracture, Contraction, Luxation, &c. 34 14 21 1 16 - 4 25. Defects of Lower Extremities from Fracture, Contraction, Luxation, &c.
	92 9 2 12 58 19 15 15 6 39 19 13		2 4 2 3 3 2 1	3 1 1 3 1	117 11 4 16 99 26 28 25 9 79 26 16 9 7 2 8 22	12 11 18 6 28 13 11 26 Flat Port
27. Disease of Joints	33 55 17		1 3		34 2 1 62	27. Diseases of Joints.
28. Other Affections of Bones and Muscles	23 2 1 3 1		1		23 2 1 7 4	28. Other Affections of Bones and Muscles.
		3 6 1 2 1 1 4 1 1 4 4 2	4 1 2 1 1		56 1 2 5 19 1 11 5 5	29. Ulcers, Wounds, and Cicatrices.
30. Other Anecolous of the Ottomosas Dyson		. 14 2 1 9 1	9 2		109 18 12 3 3 9 1	30. Other Affections of the Cutaneous System.
31. Malformation of Ears					1 1	31. Malformation of Ears,
oz. Minitimation of 14080 and Middle	65 9 2 16 7 13 4 11 3 3 4 1	7 2 3 1 1 2 5 1 1 3	4 1 1 1 1	2 2	99 )8 9 91 10 17 9 19	32. Malformation of Nose and Mouth.
on. Madorination of Choose and Spanish	11 1 1 1 1 1 1	3 1 1		2	82 18 2 21 10 15 6 16 4 5 4 1 6 11 1 10 2 14 3	
35 Inder Height	193 24 30 23 11 5 5 10 9 8 9	9 22 11 1 2 2 A A A A A A A A A A A A A A	5 1 1 1 2 1		2 232 39 2 35 32 12 8 8 10 22 13 17 18 24 1 17 7	34. Malformation of Urinary or Genital Organs.
36. Under Chest Measurement	598 148 66 35 154 46 5 90 27 10 46 82	52 204 25 0 117 0 1	16 10 12 46 7 2 4 4 5 6		1 1090 202 95 44 389 64 10 108 36 23 58 99 84 124 53 22 87	30 4 77 25 11 28 69 36 Under Cheet Massayana
	382 47 13 66 45 51 3 26 12 19 22 16	0 (30) 3 1 20	40 2 10 7 2 2 3		623 55 26 70 83 52 4 32 18 32 27 23 48 34 14 35 19	24 2 23 13 15 13 16 37, Under Weight.
So. Apparent age not in accordance	4 5 30 11 29 1 1 1 2 6 19	9 1 1 5 1 1 2 3	1 1 1		4 6 31 15 32 3 1 2 3 7 27	38. Apparent age not in accordance with Regulations.
. 39. Not likely to become an efficient soldier	32 1 19 2 1 4			3 3	2 32 3 1 1 36 2 2 9	39. Not likely to become an efficient soldier.
40. Over Height	1 2 1 2 4				1 2 1 2 5	40. Over Height
		92 590 76 43 2 558 39 40 39 32 34 58 62 434 62 38 120 377 96 158 89 26 211 33 60 3				Total Number Rejected.
		57 1453 147 127 7 1107 114 207 166 151 101 225 186 1270 149 160 284 782 228 741 284 222 876 117 167 1				Total Number Inspected.
	394 382 303 384 498 384 174 327 187 275 283 405	J5 406 517 339 286 504 342 193 235 212 337 258 333 342 416 238 408 482 421 212 313 117 241 282 359 3	66 400 378 429 429 421 236 283 95 349 246 238 275 200	00 429 143 535 375 274 200 333 97 328 183 120 333 308 91 192 45	167 374 305 298 381 490 388 192 305 173 267 264 376	Ratio of Rejections per 1,000 inspected.
173 Ap.	. Star	:/				B

B

LABOURERS, HUSBANDMEN, &c. 1901.

					Ratio per 1000.
Want of physical development	-		-	-	270
Defective vision	<b>.</b> (	-	-		143
Loss or decay of many teeth	_	-	-	-	110
Disease of heart	-	-	-	-	62

	Ratio per 1000.
Want of physical development	305
Loss or decay of many teeth	161
Defective vision - · · · · ·	132
Disease of heart	56

TRADES, SUCH AS CLOTH WORKERS, WEAVERS, &c. 1902. 1901.

				Ratio per 1000.
Want of physical development	-		-	545
Loss or decay of many teeth			-	72
Defective vision -		-	-	62
Disease of heart -	-	-	-	51

							Ratio per 1000.
Want of physical of	levelop	men	t -	-			425
Loss or decay of m	any tee	eth	-	-	-		170
Defective vision			-	- ′	-	-	134
Disease of heart	-	-	- ,0	r _	-	-	35

MECHANICS, &c.

Ratio per 1000.

364

111 101

59

1901

,			1902.
	0		
Want of p	physical	developi	nent -

•							Ratio per 1000.
Want of physical d	evelor	men	t -		-	-	252
Loss or decay of ma	any te	eth	-	-	-	-	200
Defective vision	-		-	-	-	-	123
Disease of heart	-	-	-	-	-		59

SHOPMEN AND CLERKS.

1901

Want of physical development

Loss or decay of many teeth

Defective vision

Disease of heart

27.0					
		1	0	ďχ	6

					Ratio per 1000.
Want of physical developmen	ıt -	-	-	-	471
Defective vision · ·				-	108
Loss or decay of many teeth	-	-	-	-	96
Disease of heart · ·	-			-	60

							Ratio per 1000.
Want of physical of	levelo	pmen	ıt -		-		319
Loss or decay of ma	any t	eeth		٠	-	-	. 168
Defective vision	-		-		-	-	135
Disease of heart	-		-	-	-	-	68

PROFESSIONAL OCCUPATIONS, STUDENTS. 1902.

				Ratio per 1000.
Want of physical development	-	-		401
Defective vision -				141
Loss or decay of many teeth	-	-		47
Disease of heart	-			47

							Ratio per 1000.
Loss or decay of ma	ny t	eeth	f -	~	-	-	176
Want of physical d	evelo	pmer	nt -	-	-	-	168
Defective vision	-	-	-	-	-	-	137
Disease of heart	-	-	-			-	122

BOYS UNDER 17.

1901.

1902.

				Ratio per 1000.
Defective vision			-	187
Want of physical development	-	-	-	161
Disease of heart			-	107
Loss or decay of many teeth	-			_

			Ratio per 1000.
Defective vision	-		261
Want of physical development -		-	126
Disease of heart	-	- 10	99
Loss or decay of many teeth p	-	-	57

B. Table I.—RETURN OF RECRUITS REJECTED ON INSPECTION, SHEWING CAUSE OF REJECTION, ACCORDING TO PREVIOUS OCCUPATIONS, AT CARLISLE, SHREWSBURY, WREXHAM, NORWICH, BURY ST. EDMUNDS LINCOLN, STIRLING, AYR, ABERDEEN, PERTH, READING, EXETER, TAUNTON, CHICHESTER, ARMAGH, OMAGH, AND CLONMEL (Collectively), DURING 1901 AND 1902.

						1	901.														1902.								
		1.		2.	1	3. ,		4.		5			6.		1.		2.			3.		4	4.		5.			6.	
CAUSES OF REJECTION.	Husb	Labourers, Husbandmen and Servants.		Trades such as Cloth Workers, Weavers, Lace Makers, Working Tailors, Shoemakers, etc.		Mechanics employed in occupa- tions favourable to physical development (as Carpenters, Smiths Masons, etc.)		Shopmen and		Professional Occupations, Students.		Boys under 17 years.		Hus	Labourers, Husbandmen and Servants.		Trades such as Clothworkers, Weavers, Lace Makers, Working Tailors Shoemakers, etc		tions favourable to physical development (a		pa- ble (as	Shopmen and Clerks.		0	Professional Occupations, Students.			s under years.	
	Number Rejected.	Ratio per 1000. Order of Prevalence.	Number Rejected.	Ratio per 1000. Order of	Prevalence.  Number Rejected.	Ratio per 1000 Order of	Prevalence. Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Order of	Number Rejected.	Ratio Fer 1000.	Number rejected.	Ratio per 1000.	Prevalence. Number rejected.	Ratio per 1000.	Order of Prevalence,	Number rejected.	Ratio per 1000.	Order of Prevalence.	rejected.	Ratio per 1000. Order of	Prevalence. Number	Ratio per	Order of Prevalence.	Number rejected.	Ratio per 1000.	Order of Prevalence.
1. Syphilis · · · · · · · · · · · · · · · · · · ·	2	3			3	14				1	62			5	4	3	12		1	6									
2. Tubercle	2	3	1	6							a c	•		3	2	1	4												
3. Impaired Constitution and Debility	12	15	3	17	3	14								17	14	7	28		5	32							1	53	
4. Other General Diseases	18	23	6	34	9 1	5						1	91	16	13	2	8		3	19		1	12				2	105	3
5. Diseases of the Nervous System	4	5	1	6										4	3														
6. Weakness of Intellect	11	14								1	62			22	17	3	12					1	12						,
7. Defective Vision · · · · · · · · · · · · · · · · · · ·	90	113 2	20	114	3 13	61	5 13	163	2			2	182	2   132	105	3 27	108	3	16	101	3	10	121	3 2	143	2	4	210	1
8. Diseases of Eyes and Eyelids	8	10	3	17	5	23								5	4														
9. Diseases of Nosc and Mouth	1	1		ì										4	3														
10. Disease of Ears.	4	5			1	5								5	4		i												
11. Deafness	6	8			1	5								4	3	2	8		1	6		2	24				1	53	
12. Impediment of Speech	3	4	3	17	2	9								5	4														
13. Disease of Heart	70	88 5	5 7		8 24	113	2 7	88	4	1	62	1	91	104	83	4 15	60	5	11	70	5	10	121	3	1 71		1	53	
14. Disease of Arteries (Aneurysm)					21																								
15. Disease of Veins (Varix)	37	46	8 8	46	6 12	56	6 6	75	6					79	63	6 5	20		13	82	4	4	48	7			1	53	
16. Disease of Lungs (except Tubercle)	5	40	, ,	11	12	,,,,							91	1	1	2	8		1	6		1	12						
17. Loss or decay of many teeth	75	94 3	3 24	137	2 23	108	3 12	150	3	}				193	153	2 53	213	1	29	183	1	14		2 2	2 143	3 2	3	158	9
18. Hernia · · · · · · · · · · · · · · · · · · ·		25	8	46	B 7	33	2	25						30	24	11		7	6	38		5	60	6					
19. Laxity of Abdominal Rings		11	1	40		5.0		20						5	3							3	12						
	8	11	1		1	5								1	1														
20. Hæmorrhoids		1		1)	1	'	1	12						3	2				,	6									
21. Diseases of the Urinary Organs		1		0		,					125	3		51	41	7	28		8	51	7	3	36	8					
22. Varicocele		40 8	5 11	0.5	9 11	92	8 4	• 10		2	120	"		3	3	1	20			13		"		0					
23. Other Diseases of the Genital Organs (not Syphilitic)	1 1	1			2	9								16	13	3	12		3	13		1	12						
24. Defects of Upper Extremities from Fracture, Contraction, Luxation, etc.				29	3									61					2							,		~ 1)	
25. Defects of Lower Extremities from Fracture, Contraction, Luxation, etc.	1 1	35	3		5	23									48	8 7			3	19	_		24		1 71			53	
26. Flat Feet		39   9		23	12		6 3	38						62	49	7 10	40	8	8	51	7	1	12		1 71	1	1	53	
27. Diseases of Joints	la de	13		11	4	19								10	8	1	4		1	6						,			
28. Other Affections of Bones and Muscles · · · · · ·	4	5	1	6	4	19	1	12						4	3				3	19					1 7	1	1	53	
29. Ulcers, Wounds, and Cicatrices	9	11	1	6			1	12						5	4		8		2	13									
30. Other Affections of the Cutaneous System · · · · · · · · · · · · · · · · · · ·	5	6	1	6			1	12						27	21	4	16		2	13					1 7	1	1	53	
31. Malformation of Ears																													
32. Malformation of Nose and Mouth																													
33. Malformation of Chest and Spine	11	14	2	11	2	9	1	12		1	62			16	13	3	3   12		2	13									
34. Malformation of Urinary or Genital Organs · · · · · · ·																													
35. Under Height	37	46 6	6	34	9 9	4:2	10					2	182	2 58	46	9 18	3 52	6	7	44	9	3	36	8			2	105	
36. Under Chest Measurement	135	170 1	1 26	148	1 36	169	1 20	250	1	ŏ	313	1		195	155	1 4:	2   169	2	22	139	2	16	193	1	3 21	14 1			
37. Under Weight · · · · · · · · · · · · · · · · ·		- (	20	114	3 14	66	4 7	88	4	3	188	2 3	373	1 94	75	5 28	3 92	7	9	57	6	7	84	5	2   14	13 2			
38. Apparent Age not in accordance with Regulations-		13			3	14								18	5   12		3   12	;				1	12						
39. Not likely to become an efficient Soldier-		23	5	29	11	51	8 1	12		2	125	3 1	91	4	3														
40 Over Height		<u>j</u>												1									1						-
40. Over Height						-			-											-	_			-			-	-	

			LE II.—RETURN OF RECRUITS REJECTED ON INSPECTION,	SHOWING CAUSE OF REJECTION, ACCORDING TO	PREVIOUS OCCUPATION, AT THE UNDERMENTIONED	RECRUITING STATIONS, DURING 1901.		
	LABOURERS, HUSBANDMEN AND SERVANTS.	TRADES, SUCH AS CLOTH WORKERS, WEAVERS, LACE MAKERS, WO TAILORS, SHOEMAKERS, BAKERS, ETC.	ORKING MECHANICS EMPLOYED IN OCCUPATIONS FAVOURABLE TO PHYSICAL DEVELOPMENT, AS CARPENTERS, SMITHS, MASONS, ETC.	SHOPMEN AND CLERKS.	Professional Occupations, Students.	BOYS UNDER 17 YEARS.	TOTALS.	
CAUSES OF REJECTION.	Carible. Silverscharz. Wreschan. Wreschan. Borsetch. Brays. Eduwah. Lawola. Skiting. Skiting. Rending. Rending. Exeter. Thanton.	Armogh,  Dangh,  Cleaned,  Cleaned,  Meximum  Novelsh,  Novelsh,  Skiring,  Skiring,	Colomoda, Colomo	Slaves shary, New shary, Shifting, Shifting, Shifting, Shifting, Shifting, Shifting, Shifting, Shifting, Thenlo, The	Carlyla. Carlyla. Surveshary. Weekham. Noewich. Bury St. Edmunh. Caladrester. Chichester. Chichester. Chichester. Avmagh.	Cartillaria Shareshury.  Weevision  Weevision  Weevision  Weevision  Artiflag  Reading  Everity  Forth  Chichester  Chichester	Cardisde, Sharea-slury; Wre-slam, Norwich, Bury St. Edmunds, Lincoln, Skirling Abserteen, Agr. Feerle, Rooding, Exeter, Townson, Chichester, Armingh, Omnigh, Omnigh,	CAUSES'OF BEJECTION.
1. Syphilis 2. Tuborclo 3. Impaired Constitution and Debelty 4. Other General Diseases 5. Diseases of Ner ous System 6. Weskness of Intellect 7. Defective Vision 8. Diseases of System and Eyeluls 9. Diseases of News and Mouth 10. Diseases of News and Mouth 11. Diseases 11. Deafores	1 2 2 1 4 1 12 2 3 3 5 19 5 6 12 2 3 3 5 19 5 6 12 2 3 3 5 19 5 6 12 2 3 3 5 19 5 6 12 2 3 3 5 19 5 6 12 2 3 3 5 19 5 6 12 2 3 3 5 19 5 6 12 2 3 3 5 19 5 6 12 2 3 3 5 19 5 6 12 2 3 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 2 3 5 19 5 6 12 5 19 5 6 12 5 19 5 6 12 5 19 5 6 12 5 19 5 10 5 10 5 10 5 10 5 10 5 10 5 10						1	1. Syphilis. 2. Tuberele. 3. Impaired Constitution and Debility. 4. Other General Diseases. 5. Diseases of Nerrous System. 6. Weakness of Intellect. 7. Defective Vision. 8. Diseases of Eyes and Eyelida. 9. Diseases of Nose and Mouth. 10. Diseases of Ear. 11. Deafness. 12. Impadiment of Speech.
12. Impediment of Speech 13. Disease of Heart 14. Disease of Arteries (Aneurians 15. Disease of veins (Varix) 16. Disease of Lunge (except Tubercles) 17. Los or Decay of many Teeth 18. Hernia 19. Laxity of Abdominal Rings 20. Havanorrhoids 21. Diseases of the Urinary Organs 21. Diseases of the Urinary Organs	1 1 2 5 5 4 13 7 6 9 7 7 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 1 2 3 1 1 3 1 1 3 1 1 1 2 1 2 1 1 4 1 4 1 4 1 4 1 4 1 4 1	1 1 2 3 1 1 1 1 1				9 1 3 5 5 1 4 35 8 6 10 13 7 1 2  3 1 1 1 2 11 4 4 35 8 6 10 13 7 1 2  1 1 2 22 3 3 13 1 36 11 22 5 5 5 10 1  1 1 2 3 1 2 2 2 5 5 5 10 1  1 1 2 3 3 4 2 2 1  1 1 1 1 1 1 1	13. Discase of Heart.  14. Discase of Arteries (Aneurism).  15. Discase of Veins (Varix).  16. Discase of Lange (except Tubercle).  17. Less or decay of many teeth.  18. Hernia.  19. Laxity of Abdominal Rings.  20. Hemorrhoids.  21. Discases of the Urinary Organs.
22. Variencels 23. Other Diseases of the Genital Organs (not Syphillitic) 24. Defects of Upper Extremities from Fracture, Contraction, Luxati 25. Defects of Lower Extremities from Fracture, Contraction, Luxati 26. Flat Fest 27. Disease of Joints 28. Other Affections of Bones and Muscles 29. Ulers, Wounds, and Cleatries 30. Other Affections of the Cutaneous System	idou, &c. 3 1 1 5 2 1 1 2 3 3 5 5 5 5 1 1 1 2 3 3 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6	1 2 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				2 3 2 3 1 2 2 1	22. Varioceale.  23. Other Dismass of the Genital Organs (not Syphilitie).  24. Defects of Upper Extremities from Fracture, Contraction, Loxation  25. Defects of Lower Extremities from Fracture, Contraction, Loxation  26. Flat Feet.  27. Diseases of Joints.  28. Other Affections of Bones and Muscles.  29. Ulters, Wounds, and Cicatrioes.  30. Other Affections of the Cutaneous System.  31. Malformation of Ear.
31. Malformation of Ear  32. Malformation of Nose and Month  33. Malformation of Chest and Spine  34. Malformation of Urinary or Genital Organs  35. Under Height  36. Under Chest Measurement  37. Under Weight  28. Apparent age not in accordance with Regulations  29. Not likely to become an efficient soldior  40. Over Height	5 7 1 6 4 11 5 7 1 6 4 21 1 3 2 2 11 10 4 2 11 4 25 23 22 1 11 5 1 3 9 2 10 7	2 6 3 2 2 2 1 1 6 1 6 2 5 1 1 6 3 1 1 1 1 1 1 1 7 2 6 1 1 1 2 6				3	1 5 10 1 14 5 1 11 2 3 1 1 8 6 3 2 16 12 11 1 2 42 1 32 38 32 11 3 5 21 1 9 7 3 2 1 22 3 12 10 23 3	Malformation of Noso and Mouth.     Malformation of Chest and Spine.     Malformation of Urinary or Genital Organs.
Total Number Rejected			2 - 13 6 7 - 5 5 18 3 - 86 5 13 10 30 10 1				79 43 62 — 34 84 81 42 15 244 83 106 111 145 99 30 31	Total Number Rejected.
Total Number Inspected			5 14 57 13 14 10 50 40 129 45 19 231 36 28 44 114 28 10					Total Number Inspected.
Ratio of Rejections per 1,000 inspected	- 291 122 365 94 155 265 96 169 432 175 302 325 326	3 305 253 277 - 216 571 - 182 161 333 174 111 381 154 100 300 308 438	400 - 228 402 500 - 100 125 139 67 - 372 139 420 227 263 357 100 66	77 357   375     - 383 286 382   - 194 231 304 556 400 273 200	375 182 182 273 500 - 375	200 500 -	271 150 380 92 161 228 130 127 374 167 301 313 307 341 234 25	Ratio of Rejections per 1,000 inspected.
173 - Ар.								(2)

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	LABOURERS, HUSBANDMEN, AND SERVANTS.	TRADES SUCH AS CLOTH WORKERS, WEAVERS, LACE MAKERS,	MECHANICS EMPLOYED IN OCCUPATIONS FAVOURABLE TO PHYSICAL DEVELOPMENT AS CARPENTERS, SMITHS, MASONS, ETC.	Shopmen and Clerks.	PROFESSIONAL OCCUPATIONS, STUDENTS.	Boys Under 17 Years.	TOTALS.	
	LINDUNARY ACCOUNTS BY AND DESTANTS	WORKING TAILORS, SHORMAKERS, BAKERS, ETC.	- Ham	numis.	normets.	munds.	Section of the sectio	CAUSES OF REJECTION.
CAUSES OF REJECTION.	angholo.  Yeoxiam. Yeoxiam. Yeoxiah. Any Se, Edmingery, Se, Edmingery, Se, Edmingery, Se, Edmingery, Striffingery, Striffingery, Striffingery, Seedinger, Feedingery, Feedingery, Feedingery, Feedingery, Feedingery, Franton, Shieblester, Armagh. Dungh, Dungh,	Commet. Carliste. Sirvevbary. Streechan. Storyich. Lincoln. Apr. Abriling. Perth. Perth. Conding. Armon. Conding. Armon. Omagh. Omagh.	Corbisio. Sirewowary. Sirewowary. Norwish. Introduction of the corporation of the corpora	Shrewelary. Wroxham. Norwich. Hary St. Edi. Elincoln. Stirling. Stirling. Ayr. Forth. Forth. Chenketer. Chichester.	Situwoelonry Wereshum. Norwich. Istory Sk. Editoria. Stirting. Aberdean. Ayr. Ayr. Teanton. Chichester. Transton. Chichester. Armagh. Cordists.	Strewbury, Strewbury, Strewbury, Strewbury, Norwishan, Norwisha, Bury St. Ed. Lincoln. Stirling. Stirling. Perth. Perth. Transfon. Transfon. Clidebester. Arrangh.	Shrowshure Wroshum, Norwich, Rury St. E. Gricolin, Stirling, Ayer, Perth, Perth, Taunton, Traunton, Omugh, Cilonnol,	
								Syphilis.     Tubercle.
1. Syphilis							2 3 3 6 7 1 2 4 1 1	3. Impaired Constitution and Debility.
3. Impaired Constitution and Debility	1 2 2 3 1 1 1 4 1 1	1 1 2 2 1	1 4				. 3 31 2 8 1	4. Other General Diseases.
4. Other General Diseases	3 5 2 4							5. Diseases of Nervous System. 6. Weakness of Intellect.
5. Diseases of Nervous System							3 1 3 1 2 2 1 1 1 9	6. Weakness of Intellect. 7. Defective Vision.
6. Weakness of Intellect	3 1 3 1 2 2 1 2 3 2	4 1 2 5 1 4 3 1 1 1 3 1 3	1 1 1 5 3 1 1 1 1	1 1 1 1 1 1 1 2 1		1 3	10 9 6 23 10 18 15 5 15 23 20 6 18 4 2 7	8. Diseases of Eyes and Eyelids.
7. Defective Vision 8. Diseases of Eyes and Eyelids	1 2							9. Diseases of Nose and Mouth.
9. Diseases of Nose and Mouth	2 1						3 2	10. Disease of Ear.
10. Disease of Ear - · · · · · · · · · · · · · · · · · ·	3						3 3 2 1	11. Deafness.
11. Deafness	1 1 2						2 3	12. Impediment of Speech.
12. Impediment of Speech 1.	2 3	4 5	1 1 2 1 1 1 2 1	2 1 2 1 3 1			14 4 2 38 15 5 E 2 15 14 15 3 7 4 1	13. Disease of Heart.  14. Disease of Arteries (Ancurysni).
13. Disease of Heart	11 3 1 25 9 4 2 2 11 10 14 2 6 3	8 5					4 1 5 14 3 6 5 2 1 7 18 1 14 8 3 4 6	
14. Disease of Arteries (Aneurysm)	3 1 5 11 3 3 5 1 1 7 12 9 7 2 3	6 2 1 1 1 1	2 1 4 1 5	1 1 1 1			1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	16. Disease of Lungs (except Tubercle).
15. Disease of Veins (Varix) .  16. Disease of Lungs (except Tubercle)								17. Loss or decay of many teeth.
17. Loss or Decay of many Teeth	12 6 21 27 1 16 17 4 6 28 11 18 12 4 4 3	3 2 3 5 11 3 14 2 1 2 2 4 6 1	2 1 2 1 3 3 3 1 6 4 1 2	1 5 3 2 2 1				18. Hernia.
18. Hernia	1 2 3 1 3 2 4 3 3 2 6	1 1 1 1 1 2 2 1 1	1 1 2 1				1 2 1 1 1	19. Laxity of Abdominal Rings.
19. Laxity of Abdominal Rings								20. Hæmorrhoids.
20. Hemorrhoids								21. Diseases of the Urinary Organs. 22. Varicocele.
21. Diseases of the Urinary Organs			1 2 1 1 2	1 1 1			1 4 10 5 3 6 5 2 6 3 8 13 2 1	23. Other diseases of the Genital Organs (not Symbilis).
	1 4 8 4 3 3 * 1 4 3 3 * 1		2				1 2 2 2 2 2 5 2 2 1 2	24. Defects of Upper Extremities from Fracture, Contraction, Luxation, &c.
Other diseases of the Genital Organs (not Syphilis)      Defects of Upper Extremities from Fracture, Contraction, Luxation, 8	e. 1 2 2 1 4 1 2 1 2	1 2			A		4 7 3 10 2 6 3 7 7 10 11 3 2	25. Defects of Lower Extremities from Fracture, Contraction, Luxation, &c.
25. Defects of Lower Extremities from Fracture, Contraction, Luxation, &	ze. 3 6 1 9 2 6 3 7 7 8 7 1	1 1 1 3 2	1 1					26. Flat Feet.
26. Flat Feet - · · · · · · ·	2 4 5 5 4 12 2 2 3 1 4 7 4 5 1		2 1 5					27. Diseases of Joints.
27. Diseases of Joints	2 3 2 3					1		28. Other Affections of Bones and Muscles.
28. Other Affections of Bones and Muscles		2	2				2 4 1 2	29. Ulcers, Wounds, and Cicatrices. 30. Other Affections of the Cutaneous System.
29. Ulcers, Wounds, and Cicatrices	1 4 1 6 1 8 1 5	1 1 2	1 1 1				1 5 1 8 1 9 1 8	30. Other Alections of the Cutaneous System. 31. Malformation of Ear.
30. Other Affections of the Cutaneous System -								32. Malformation of Nose and Mouth.
31. Malformation of Ear							2 2 3 44 1 1 1 1 2 2 1 6	33. Malformation of Chest and Spine.
32. Malformation of Nose and Mouth  33. Malformation of Chest and Spine	1 2 3 1 1 1 1 1.	6 1						34. Malformation of Urinary or Genital Organs.
34. Malformation of Urinary or Genital Organs			1 1 2 1 1	3		1 1		35. Under Height.
35. Under Height	3 1 5 4 2 1 22 14 2 3	1 1 2 6 1 2 1 2 2 2 13 10 3 1 1 1 + 5	1 2 1 3 4 1 4 1 3 3	1 2 3 3 9 9 9 1	2 1		10 21 21 2 23 9 2 14 9 27 7 26 3 4 3	
36. Under Chest Measurement	8 17 14 33 1 35 13 6 2 10 7 18 4 19 2 4 5 2 13 18 9 6 3 1 18 6 5 2 5 1	1 1 5 1 4 4 3 1 1 1 1	1 1 1 2 1 1 2	2 2 1 1				37. Under Weight.
37. Under Weight	5 2 13 18 9 8 3 18 9 8 3	3 1 1 1					53 1 3 9 1 1 3	38. Apparent age not in Accordance with Regulations.  39. Not likely to become an efficient soldier.
38. Apparent age not in Accordance with Regulations		2						40. Over Height.
39. Not likely to become an efficient soldier								
40. Over Height			2 2 2 11 2 20 14 15 - 12 11 17 25 4 4 1	2 5 4 11 11 1 5 3 1 - 15 1 9 - 6 5 1	1 2 2 - 1 1 3 1 - 1 3	1 - 1 4 1 1 - 1 9 1	95 83 116 256 48 150 133 66 20 179 128 158 99 116 61 29 45	Total Number Rejected.
Total Number Rejected	72 61 87 180 35 109 68 36 16 141 92 115 65 89 34 22	37 8 11 10 49 8 13 47 13 4 10 14 16 8 17 18 1						
		108 25 40 17 59 33 34 94 44 17 29 66 65 36 86 60 8	11 33 10 18 93 50 61 66 73 13 31 46 70 61 25 25 10	2 18 13 15 21 13 16 11 21 4 35 22 17 7 32 23 17	3 4 18 2 16 2 1 1 2 10 2 2 1 9	16 6 8 23 1 3 7 4 3 2 39 9 9 6 1 2 1	376 289 250 820 410 486 386 330 118 542 580 585 441 564 293 150 136	Total Number Inspected.
Total Number Inspected	271 216 192 609 311 366 208 186 80 115 405 414 326 413 384 112					90 100 100 100 100 100 100 100 100 100 1	200 200 001 013 115 200 215 200 100 290 201 370 301 300 300 300 300 300	Paris of Rejections per I 000 inspected
	266 283 453 296 113 298 327 194 200 317 227 278 199 215 185 196	343 229 275 588 875 242 382 500 295 235 345 212 246 222 198 300 123	182 212 500 389 118 (8) 328 212 205 - 387 239 243 410 160 160 100	1000 278 308 733 524 77 313 273 48 425 45 529 188 217 294 30		03 - 120 174 143 250 - 500 231 111	253 257 464 312 117 300 345 200 109 330 221 270 224 206 208 103 331	Addition to the per 1,000 this percedu.
Ratio of Rejections per 1,000 inspected								D
173.—Ap. (1?)					7.4		Friends To the Control of the Contro	
**					The same and the s			

# Table 4.

# LABOURERS, HUSBANDMEN, &c.

1901.			190
	Ratio per		

	Ratio per 1000.
Want of physical development	346
Defective vision	113
Loss or decay of many teeth	94
Disease of heart	. 88

	_				
					Ratio per 1000.
Want of physical development				-	293
Loss or decay of many teeth	-	-	-	-	153
Defective vision	:	-	-	-	105
Disease of heart	-	-	-	-	83

# TRADES, SUCH AS CLOTH WORKERS, WEAVERS, &c. 1901.

	Ratio per 1000.
Want of physical development - · · ·	342
Loss or decay of many teeth	137
Defective vision	114
Disease of heart	40

	Ratio per 1000.
Want of physical development	341
Loss or decay of many teeth	213
Defective vision	108
Disease of heart	60

# MECHANICS, &c.

# 1901.

# 1902.

	Ratio per 1000.
Want of physical development	342
Disease of heart	113
Loss or decay of many teeth	108
Defective vision	61

	Ratio per 1000.
Want of physical development	272
Loss or decay of many teeth	183
Defective vision 7	101
Disease of heart	70

# SHOPMEN AND CLERKS.

1901.

1902.

					Ratio per 1000.
Want of physical development	-	-			350
Defective vision - · ·	-		-		163
Loss or decay of many teeth	-	-		-	150
Disease of heart	-	-	- -	-	88

					Ratio per 1000.
Want of physical development			-		313
Loss or decay of many teeth	-	-	-	-	169
Defective vision	-	-	-	-	121
Disease of heart				-	121

# PROFESSIONAL OCCUPATIONS, STUDENTS.

1901.

1902

				Ratio per 1000.
Want of physical development -		•	-	626
Disease of heart			-	62
Defective vision	-	-	-	
Loss or decay of many teeth -	•		-	

	Ratio per 1000.
Want of physical development	357
Defective vision	143
Loss or decay of many teeth	143
Disease of heart	71

# BOYS UNDER 17.

1901.

1902.

	Ratio per 1000.
Want of physical development	546
Defective vision	182
Disease of heart.	91
Loss or decay of many teeth	_

					Ratio per 1000.
Defective vision	-	-	-	-	210
Want of physical development	-	-	-	-	158
Loss or decay of many teeth	-	-	-		158
Disease of heart	-	-	-	-	53

#### APPENDIX VII.

MEMORANDUM AND TABLES RELATING TO THE PHYSICAL CONDITION OF CANDIDATES FOR ENLISTMENT IN THE NAVY AND MARINES, PREPARED BY COLONEL G. T. ONSLOW, C.B., INSPECTOR OF MARINE RECRUITING, A MEMBER OF THE COMMITTEE.

> Admiralty Recruiting Department, 7, Whitehall Place, S.W. 7th December, 1903.

Sir,-

I have the honour to submit, for the information of the Committee appointed to inquire into the alleged Physical Deterioration of certain classes of the population, statistics compiled from Recruiting Returns of the Royal Marine Recruiting Officers raising recruits for the Naval Service.

It would be difficult to obtain perfect information from other Naval Recruiting Agencies, the R.N. Depôts at the Home Ports, Coast Guard, etc., owing to the fact that there would be danger of the same men being counted twice.

I have, therefore, not attempted this, and the Returns submitted refer only to Naval Recruiting in the Royal Marine Recruiting Districts, which cover the inland parts of the Kingdom and large Sea Port Towns, not Naval Ports, the number of recruits raised being 77 per cent. of the total R.N. and R.M. entries for the year 1902-3.

The remaining 23 per cent. raised by Naval Recruiters would come mainly from the Sea Coast and Naval Ports, and are generally of a class superior in physique to those

All recruiters are put through a course of instruction, attending the medical officer at his examination on first appointment, prior to being posted to an out-station. They are, consequently, capable of conducting a very close examination of recruits, and only pass on for medical examination men and boys who have a reasonable chance of passing.

The bulk of medical rejections are of candidates presenting themselves at the headquarter stations, who go direct to the medical officer without previous examination,

xcept for height and chest measurements.

The number rejected by recruiters is very large; unfor-unately, complete records have not been kept prior to August, 1903, but at a rough estimate it is between 30 and

40 per cent. of the total applicants. The rejections include defective vision, defective teeth, varicose veins, flat feet, deafness, general poor physique, deficiency in height and chest measurement, and any other defects observable by other than a medical expert.

In the attached tables the nomenclature of causes of rejection used in the Returns of the Director-General, Army Medical Service, are followed. Nos. 35 to 40 are omitted, complete records not being available.

The following tables are attached:-

Table "A." A return for the year 1st April, 1902, to 31st March, 1903, of candidates for the Naval Service examined by medical officers attached to the Admiralty Recruiting Stations Royal Marine Recruiting Districts, found fit and unfit respectively, for the Royal Navy and Royal Marines, showing District in which raised and previous employment, so far as can be ascertained.

Table "B." List of principal towns in which Admiralty Recruiters are stationed, as a key to the Districts enume-

rated in "A."

Table "C." A similar return to Table "A," showing numbers rejected as unfit, with causes of rejection classified

by previous callings, and ratings in the Royal Navy and Royal Marines for which the candidate volunteered.

Table "D." A return showing number of candidates rejected at the Admiralty Recruiting Station in London only, during the three years 1st April, 1900, to 31st March, 1903, with causes of rejection, classified approximately according to ages of candidates.

> I have the honour to be, Sir, Your Obedient Servant, G. T. ONSLOW, Colonel, R.M.L.I., Inspector of Marine Recruiting

The Chairman. Physical Deterioration Committee.

FOUND FIT AND UNFIT ON MEDICAL EXAMINATION IN THE RECRUITING DISTRICTS, ROYAL MARINE RECRUITING SERVICE, TABLE A .- RETURN FOR THE YEAR 1ST APRIL 1902 TO 31ST MARCH 1903 OF NUMBER OF RECRUITS FOR R.N. AND R.M., EXAMINED SHOWING PREVIOUS EMPLOYMENT.

		·uop	.lot		.msdgnin		ter.		gow.		rpool.		chester.		.mshgni		hampton,	*?			TOTAL.	AL.	
		шот	sirA		Birr		Exe		Glas		əvi.I		nsM		ttoV		gnog	York		Fit.	Unfit.	.bənin	er tage toted.
	157 43	Unfit.	Fit.	Unfit.	Fit. U	Unfit.	Fit. U	Unfit.	Fit. U	Unfit. F	Fit. Ur	Unfit. Fit.	t. Unfit.	lt, Fit.	Unfit.	Fit.	Unfit.	Fit.	Unfit.			Exan	Cen
Labourers, Agricultural Grooms, etc	383	186	93	19	77	00	112	56	61	26 2	792	49 5	52	8 65	60	124	6	83	6	1312	343	1655	50.
Labourers and Improvers, Carpenters, Bricklayers, and others	338	174	122	83	130	34	44	13	116	19 1	183	50	94 1	18   199	9 27		∞	70	41	1358	379	1737	21.8
Labourers, Dock and General Town (no fixed employment)	1760	1021	156	20	9	14	15		84	27 5	521	94 351		82   161	1 13	1117	31	66	28	3324	1369	4693	29.1
Mill and Factory Workers, and Miners (not Skilled	576	332	100	53	160	32	21	15	86		500	52 358		54 166	32	00	23	58	ದ	1715	574	2289	25.
Skilled Mechanics, etc., engaged in employments favourable to development of physique	448	237	40	12	10		9	-	113	32 1	108	18 133		10 11	4	8	63	99	18	955	341	1296	26.3
Employees in Shops, Offices—and Servants	886	483	113	38	68	15	45	23	117	26 3	367	43 266		50 71	1 16	152	37	61	14	2170	745	2915	25.5
No definite employment—Students, etc	140	86	1		9	4	63		C1	ಣ	- 82	က			3	 4	1	9	ಣ	189	74	263	28.1
Total Fit.	4534		624		532		245		291	1669	69	1254	4	674		487		413		11023			
Total Unfit		2491		163		108		693		191	~~~~~	309	555	63	86		68		91		3825		
Total Examined	76	7025	787	7	640		338	~	752		1978		1476		772		576	50	504			14848	
Percentage rejected to Examined	೯೦	35.4	20.7	7.	16.8	on.	27.5	10	21.4	-4	15.6		15		12.6		15.4	18.					25.7

# TABLE B.—ROYAL MARINE RECRUITING DISTRICTS.

Showing Towns in which Recruiters are stationed explanatory of areas covered by Districts given in Table A.

DISTRICT.	Towns in which Recruiters are Stationed.
LONDON	Head Quarters: 7, Whitehall Place, S.W.  Kingston-on-Thames, Cambridge, Norwich, Ipswich.
LIVERPOOL -	Head Quarters: 97, Paradise Street, Liverpool.  Carlisle, Barrow-in-Furness, Preston, Warrington, Everton, Wigan, Blackpool.
BELFAST	Head Quarters: 44, Clifton Street, Belfast.  Londonderry, Ballymena, Newry, Ballymacarrett, Lisburn,
BRISTOL ·	Head Quarters: 17, Bath Street, Bristol.  Cardiff, Frome, Gloucester, Hereford, Bath, Swindon, Swansea, Cheltenham, Newport Pembroke Dock.
BIRMINGHAM	Head Quarters: 26, Broad Street, Birmingham.  Kidderminster, Worcester, Wolverhampton, Northampton, Coventry, Hanley, Burton on-Trent, Dudley.
SOUTHAMPTON -	Head Quarters: 48, Bridge Street, Southampton.  Jersey, Farnborough, Salisbury, Reading, Dorchester, Bournemouth, Eastleigh, Winchester, Devizes.
MANCHESTER	Head Quarters: 289, Deansgate, Manchester.  Bury, Halifax, Blackburn, Burnley, Stockport, Oldham, Ashton-under-Lyne.
NOTTINGHAM	Head Quarters: 27, Derby Road, Nottingham.  Leicester, Derby, Ilkeston, Chesterfield, Lincoln, Sheffield, Rotherham, Heeley, Sherwood.
EXETER	Head Quarters: 104, South Street, Exeter.  Tiverton, Taunton, Yeovil, Newton Abbot, Barnstaple, Bridgewater, Honiton.
YORK	Head Quarters: 43, Tanner Row, York.  Hull, Leeds, Wakefield, Middlesborough, Newcastle, Harrogate.
GLASGOW •	Head Quarters: 168, London Street, Glasgow.  Edinburgh, Aberdeen, Greenock, Hamilton, Paisley, Perth, Kilmarnock, Dundee.

TABLE C.—RETURN OF RECRUITS FOR ROYAL NAVY AND ROYAL MARINES MEDICALLY EXAMINED AT ADMIRALTY RECRUITING STATIONS ROYAL MARINE DISTRICTS FOR THE YEAR 1st APRIL, 1902, TO 31st MARCH, 1903, SHOWING NUMBERS REJECTED, WITH CAUSES OF REJECTION, CLASSIFED BY PREVIOUS OCCUPATION OF THE CANDIDATES.

		and	gộ	stem.			relids.	outh.					(x).		h				ry eases (not		remi-	remi- ntrac-			ones		Je Je		and	t and	ital		TOTAL.			***	
Syphilis.	o Tubercle.	Impaired Constitution Debility.	Other General Disease	n Disease of Nervous Sys	Weakness of Intellect.	Defective Vision.	o Diseases of Eyes & Ey	Diseases of Nose & Mo	Disease of Ear.	Deafness.	Impediment of Speech	Disease of Heart and Arteries (aneurysm).	Disease of Veins (Vari	Diseases of Lungs	Loss or Decay of Man.	Hernia.	Laxity of Abdominal Rings.	. Hæmorrhoids.	Diseases of the Urina Organs and other Diseases of the Genital Organs Syphiletic).	Varicocle.	Defects of Upper Extrins from Fracture, Cction, Luxation, etc.	Defects of Lower Extre ties from Fracture, Cont tion, Luxation, etc.	S Flat Feet.	Diseases of Joints.	Other Affections of B	Ulcers, Wounds and Cicatrices.	Other Affections of the Cutaneous System.	Malformation of Ear.	Malformation of Nose Mouth.	Malformation of Ches	Malformation of Geni	Unfit.	Fit.	Examined.	Percentage Unfit to Total Examined.	Order of Prevalence.	
Boys, Average Age 16 Years.	2.	3.	4.	0.	0.	1.	8.	9.	10.	11.	12.	13&1	1. 10.	100		10.	10.	20.	21 (0 25)			20.	1	21.	20.	20.	00.	01.	02.	00.	01.			1		,	
1. Labourers, Agricultural, Grooms, etc.	1	5	1	_	-4	42	1	2	5	5	-	2	2	1	11	6	_	1	2	14	8	10	4	-	2	1	3			3	_	132	437	569	23.19	7	1.
2. ,, Artisans, Carpenters, etc	-	5	-	-	_	23	-	2	4	3	1	3	2	-	13	3	-	_	2	9	5	5	3	_	_	_	3		_	1	1	88	262	350	25.14	5	2.
3. ,, Dock and General Town	2	28	2	-	-	211	3	10	10	10	2	18	6	1	23	36	-	-	6	47	7	39	10	2	1	5	6	_	-	10	1	496	1,094	1,590	31.19	1	3.
4. Mill and Factory Workers and Miners not Skilled Mechanics 1	4	32	1	1	_	77	2	12	7	3	1	8	3	3	24	10	_		5	15	2	21	2	3	1	3	3			7	_	251	774	1,025	24.48	6	4.
5. Skilled Mechanics in employments favourable to development of physique	1	2	1			14		2	2	1	3	2	1		3	3	_	_	2	4	1	5	1		_	2	1	_	_	1	1	53	134	187	28.34	2	5.
6. Employees in Shops, Offices, and Servants						1					Į				33	1						24				3	6	_	1	5	5			1,349	26.38		6.
7. No definite employment, Students, etc											1				1					2	2	_	_	_	1		1			6	_	45	124	169	26.62	3	7.
Total 1	_					i						_	_	_	110	-	-!									14	23		1	33	8	1,421	3,818	5,239	27.12		
						9.31					<u> </u>	1		1	2.09					1							- !		1		1		1	1	1	1	-
Stokers, Marines, Etc., Average Age 20.  1. Labourers, Agricultural, Grooms, etc 1	2	10	2	2	1	39	1	3	5	6	1	12	14	1	17	9	_	2	3	28	7	10	2	1	3	3	10	_		7	1	203	857	1,060	19.15	6	1.
2. ,, Artisans, Carpenters, etc 1	1	11	2	1		43	3	4	6	2	2	16	10	-	25	9		_	3	15	4	20	2	_	-	4	4	_	_	3	1	192	816	1,008	19.04	7	2.
3. , Dock and General Town 5	3	45	5	-		227	5	15	20	15	12	48	43	5	105	43	-	2	12	84	23	54	25	7	5	17	19		1	20	6	871	2,210	3,081	28.27	2	3.
4. Mill and Factory Workers and Miners not Skilled Mechanics - 1	4	48	1		_	57	4	7	4	5	3	12	10	5	31	14	_	1	3	29	8	18	8	2	1	10	7	_	1	6	5	305	905	1,210	25.20	4	4.
5. Skilled Mechanics in employments favourable to development of physique	2	5	1	1	1	15	1	_	_		2	7	5	1	13	3		3	3	9	3	4			1	_	2			3		85	234	319	26:64	2	5.
6. Employees in Shops, Offices, and Servants 1		24	6	_	_	75	1	5	14	6	2	25	18	1	36	23	_	2	9	46	7	18	8	1	2	7	6	_	_		3				24.55		6.
7. No definite employment, Students, etc				1	}			_	1		1	3	1	_	_	1	_	_		1					_	_		_	_	_	_	25	59		29.76		7.
Total 9	16	148	18	4	2	466	14	34	50	34	23	123	101	13	227	102		10	33	212	52	124	45	11	12	41	48		2	<del></del>	16	2,038	6,178	8,216	24.8		
	1	1				9.07				<u> </u>	}	1	1		2.76				1				1	1			<u> </u>										
ARTIFICERS AND SUPERIOR RATINGS, AVERAGE AGE 22.  1. Labourers, Agricultural, Grooms, etc 1	-	_	_	_	_	1	-	_	-	-	-	-	2	-	1	-	-		_	1	_	2		-		_	_	_	-	-	_	8	18	26	23.07	6	1.
2. ,, Artisans, Carpenters, etc 1	2	7	-	2	_	22	1	2	2	-	_	6	7	-	22	4	-	2	4	6	_	3	1	-	-	1	2	-	_	1	1	99	280		26.12		2.
3. " Dock and General Town	-	_	-	_		-	-		_	-	-	1	-	-	-	1	_		-		_	-	_	-	-	-	_	_		_	-	2	20	22	9.09	7	3.
4. Mill and Factory Workers and Miners not Skilled Mechanics -	-	4	_	_	_	6	-	1		-	1		2	-	-	2	-		_	1	-	1		_	_	_		_	_	-	_	18	36	54	33.33	2	4.
5. Skilled Mechanics in employments favourable to development of phsiquey-	1	4	2	_	7	53	_	2	3	4	2	10	11	2	45	9	_	_	4	17	4	8	2		_	4	1		1	5	2	203	587	790	25.69		5.
6. Employees in Shops, Offices, and Servants 1		5	2	-	-	8	-	-	_	-	_	3	1	_	3	-	_	-	1	1	1	2	_	_	_	1	1	_		_		32	80		28.57		6.
7. No definite employment, Students, etc		-		_		1					1		_	1							_	-		-	1	_	-	_		_		4	6		40.00		7.
Total 3	5	20	4	2	7	91 6·53	1	5	5	4	4	20	23	3	71 5·09	16	_	2	9	26	5	16	3		1	6	4		1	6	3	366	1,027				
Total rejected 13	31	273	29	8		-	27	82	100	66	37	197	145	24	<u> </u>	187	-	14	66	368	88	244	73	19	20	61	75	_	4	85	27	3,825	11,023	14,848	25.76		
	1				- 11	'				1		•		1	12.13		-			1	1	1															

Table D.—RETURN OF RECRUITS FOR ROYAL NAVY AND ROYAL MARINES EXAMINED BY MEDICAL OFFICERS AT THE LONDON (ADMIRALTY) RECRUITING DEPÔT DURING THREE YEARS, FROM 1st APRIL 1900 TO 31st MARCH 1903, SHOWING NUMBERS REJECTED WITH CAUSES OF REJECTION CLASSIFIED BY THE RATINGS FOR WHICH THEY WERE CANDIDATES.

	: Syphilis.	iv Tubercle.	Umpaired Constitution and Debility.	A Other General Diseases.	ca Diseases of Nervous System.	. Weakness of Intellect.	.d Defective Vision.	φ Disease of Eyes and Eyelids.	c Disease of Nose and Mouth.	.01 Disease of Ear.	. Deafness.	7 Impediment of Speech.	8. Disease of Heart and Arteries.	Disea	Disease of Lungs, except Tubercle.	. Defective Teeth.	18. Hemia.	a contract of	• Tæmorrhoids.  Diseases of Urinary and Genital	Corgans (not Syphilitie).	Varico	from Fracture, Co Luxation, etc.	Detects of Lower Extremities of from Fracture, Contraction, Luxation, etc.	.95 Flat Feet.	Diseases of Joints.	Other Affections of Bones and Wuscles.	W Ulcers, Wounds, and Cicatrices.	© Other Affections of Cutaneous System.	. Malformation of Ear.	walformation of Nose and Nouth.	JC J	Malformation of Urinary or Genital Organs.	Total Rejected.	Total found Fit.	Total Examined.	Percentage of Rejections.
Boys from 15 $\frac{1}{2}$ to 16 $\frac{1}{2}$ years		9	135	131	3		1,200 P. c. 14·11	5	5	114	47	14	90	33	9	209	105		3	45	274	26	276	39	31	6	65	50	_		67	1	2,992	5,509	8,501	35-19
Youths from 16\(\frac{3}{4}\) to 18 years (Average age, about 17\(\frac{3}{3}\) years.)	_	2	42	35	2		377 P. C. 18·70	3	1	16	9	6	22	22	4	61	41		2	12	61	4	60	9	7	1	29	16			27	_	871	1,145	2,016	43.20
Stokers from 18 to 28 years	1	1	13	15			215 P. C. 14·42	_		10	7	4	24	8	3	103	14		3	9	38	3	21	7	3		21	12			12		547	943	1,490	36-71
Marines from 17 to 23 years (Average age, about 19 years.)	1	3	23	23	4		325 P. C. 8·86	_		21	17	11	42	21	4	96	43		4	20	71	9	50	14	16	r —	57	26			20		921	2,745	3,666	25.12
Artificers and Artisans, i.e., skilled mechanics, &c., and Sick Berth Staff, a superior class to the majority of other Recruits, from 18 to 28 years (Average age, about 22 years.)		6	188	43	3		402 P. C. 6·44	7		77	17	16	95	68	5	105	76		4	15	175	13	190	54	5	22	43	36		1		36	1,705	4,538	6,243	27:31
TOTAL · · · ·	5	21	398	246	12	_	2,519	15	6	238	97	52	273	152	25	574	279		16	111	619	55	597	123	62	29	215	140	_	1	126	37	7,036	14,880	21,916	
Percentage of whole	•02	09	1.81	1.12	•05	-	11.49	•06	•02	1.08	•44	•23	1.24	-69	·11	2.57	1.27		.07	•50	2.82	•25	2.72	•56	28	•13	•98	•63	_	•00	•57	• 17	32·10			

#### APPENDIX VIII.

# MEMORANDUM AND TABLES FURNISHED TO THE COMMITTEE BY THE METROPOLITAN POLICE COMMISSIONERS.

There are no figures available which admit of direct comparison with those given by the War Office in the Memorandum of the Medical Director-General forwarded by the Home Office. The only information we have which is of any practical utility, and which is readily obtainable, is contained in Table No. 1 annexed. This shows the number of men who have applied to join since 1893, the number selected for medical examination, and the numbers actually accepted, also the numbers of men who have left the Force each year, on medical grounds, with less than three years' service, and the total strength in each year. It will be observed that the retirements through ill-health of men of less than three years' service amounted to twenty-six only in 1902, and that in none of the years under review was there any very marked deviation from the average, except in 1894 and 1895, when the figures were well below the average; and in 1899 and 1900, when they exceeded it. These years, however, were the first two years of the South African War, and the figures are affected by some of the Army Reservists who were called up to rejoin the Colours, and were ultimately found unfit to rejoin or to continue Police duties owing to illness or wounds resulting from active service in the field.

Table No. 2, taken from the Commissioner's Annual Report for 1902, shows the number of men who joined from the years 1860 onwards who are still serving; and Table No. 3, also taken from the Report, shows the length of service of the men now serving who joined from the

years 1880 onwards.

There is no satisfactory basis of comparison between Army and Police recruiting, simply because the governing conditions of these two fields of employment are essentially different. In the first place, military service is usually regarded either as an opening for young men in which the early years of manhood can be passed, and which may probably lead the way to more or less permanent employment at its termination, or as the last refuge of a number of young men who, from lack of ability or other causes, are unable to find anything better. Police service, on the other hand, is, speaking generally, sought after as a permanent means of livelihood, and is one of the best paid and promising fields for the employment of unskilled labour. A further reason which militates against any useful comparisons being drawn lies in the difference in the physical tests applied to the recruits for the two services. The military tests for physical fitness are quali-fying ones only. Under normal conditions the Army can utilise practically all the material which offers itself, providing it comes within a minimum physical standard, which is not an unduly exacting one. Our tests, on the other hand, are selective ones, applied for the purpose of securing that the limited numbers of men we are able to take shall be the best of the material available, as more men present themselves than we are able to take. result is that our requirements in the matter of physical fitness are more severe than those of any other organised service. But, bearing in mind that Police employment is permanent and well paid, and that its arduous and wearing character is compensated for by a very liberal pension scale, and a comparatively limited period of qualifying service, these tests are not too severe. mately about 50 per cent. of the recruits who present themselves for medical examination are accepted. represent the best of those who offer to join, and it must not be assumed that the remaining 50 per cent. are physical degenerates unfitted for ordinary avocations, as is understood to be the case with Army rejections. A large proportion of them—say from 35 per cent. to 40 per cent.—would be physically fit for military service according to existing standards, and for most of the ordinary callings of civil life. We reject a large number of men for no specific defect whatever, but merely because they do not come up to our standard of height, five feet nine inches, weight, ten stone, and chest measurement, thirty-four to thirty-five inches. Under a normal condition of the labour market these high standards have been maintained without difficulty. Under abnormal conditions (during the South African War, for instance, when the labour market was considerably disturbed) it has been found that a reduction of the standard of height by half an inch is sufficient to secure all the men wanted without sacrificing any of the real essentials of physical fitness.

In the lowest stratum of the population there always has been, and as far as can be foreseen there always will be, a large proportion of weaklings and incapables. there is no data available to determine whether that proportion is increasing or not. The experience of Police recruiting affords no help in that direction, and the Medical Director-General's figures do not conclusively bear out the view that there is any such marked increase as is suggested. The only thing they appear to indicate at all clearly is that a large proportion of Army recruits is drawn from a lower social class than was formerly the case; and it is obvious that the lower the class the greater will be the proportion of weaklings and degenerates in that class. The Table in the Memorandum showing the occupations of recruits is too indefinite to be of any great value. But taking it as it stands, it may fairly be assumed that crafts-men belonging to the callings enumerated are, in the majority of cases, at any rate, failures as such, or at least that they are not up to the average of capability. Otherwise they would not forsake well-paid and permanent callings for a less remunerative career in the Army. disadvantages of such a career in most cases are that it is irksome in its restraints and but poorly paid. Marriage is practically precluded, and, moreover, there are no means of providing for the bringing up of a family. Further, it, in the great majority of cases, ceases and leaves a man without paying occupation at an awkward age in life, when he is too old to learn a trade in which he must compete with younger men, and, as a consequence, the only occupations left open for him are those open for the casual employment of unskilled labour. The spread of education and the growth of facilities for communication, and of the Press, are all factors which, in combination, have had the effect of enabling most men of the class which formerly gravitated towards the Army as a natural course to aspire to less irksome callings in civil life, for which they would not have been eligible a few generations ago, and in which they not only escape the restrictions of military life, but earn better wages, enjoy greater freedom, and are free to marry when they choose.

The Police are not in a position to say that the figures given by the Medical Director-General do not indicate a condition of degeneration so widespread as he suggests; but it does appear in the light of the experience gained in Police recruiting, as well as from the fairly general knowledge obtained by the Police of the life and habits of the lower classes in London, that the figures equally suggest that the calling of a soldier has ceased to attract the class of men who formly enlisted, and that, as a consequence, a larger proportion of the residuum of the population come under the notice of the Army Recruiting

Authorities.

GEO. H. GARDNER.

TABLE No. 1.

Year.	No. of Applications received.	No. of men medically examined.	No. of men actually appointed.	No. of men leaving the Force with less than 3 years' service through ill-health.	
1893	8,574	2,213	1,040	22	15,126
1894	8,811	2,140	920	- 18	15,216
1895	7,796	1,800	756	13	15,271
1896	7,248	2,064	908	27	15,326
1897	6,618	1,936	852	22	15,452
1898	6,143	2,706	1,245	24	15,694
1899	6,745	2,809	1,154	32	15,765
1900	5,483	2,321	1,091	34	15,847
1901	5,435	2,402	1,164	27	15,977
1902	7,667	2,807	1,272	26	16,374

16 APPENDIX:

TABLE No. 2.

Return of the Number of Men actually serving at the end of the Year 1902 who joined in the undermentioned Years.

Year.	Superintendents.	Inspectors and Sub-Inspectors.	Police Sergeants.	Police Constables.	Total.
1860	****	1	_		1
1863	1	_	_	:	1
1865	7			_	7
1866	1				1
1867	1	atturne		1	2
1868	2	2	en-hije day		4
1869	2		1 Approximate	1	3
1870	3	3	1	_	7
1871	3	2		1	6
1872	2	5	1	. 1	9
1873	1	5	1	1	8
1874	2	6	3	2	13
1875	enselle	8	1	2	11
1876	.2	9	3	7	21
1877	_	22	23	65	110
1878	2	32	68	228	330
1879	1	39	92	251	383
1880		62	86	273	421
1881		62	95	265	422
1882		54	119	372	545
1883		44	148	520	712
1884		42	124	409	575
1885	_	38	121	414	573
1886		34	142	460	636
1887	avenuelee	22	149	363	534
1888	-	18	148	424	590
1889		11	155	419	585
1890	all	4	202	653	859
1891	_	4	109	419	532
1892	_	2	82	482	566
1893	_	5	84	617	706
1894	_	9	29	589	627
1895	-	4	10	527	541
1896		1	8	624	633
1897	_	-	5	602	607
1898		1	5	849	855
1899	_	_	_	835	835
1900		-	_	896	896
1901	_	_		1,002	1,002
1902			_	1,235	1,235
Totals	- 30	551	2,014	13,809	16,404

1

KETURN showing the LENGTH of SERVICE of POLICE serving at the end of each of the under-mentioned (Y-ars. TABLE No. 3.

												Number	Numbers serving,							
	Year.			Authorised Strength.	Under 1 1 Year.	1 Year and under 2.	2 Years and under 3.	3 Years and under 4.	4 Years and under 5.	5 Years and under 6.	6 Years and under 7.	7 Years and under 8.	8 Years and under 9.	9 Years and under 10.	10 Years   and under 111.	11 Years   12 Years   13 Years   14 Years and and and and and under 12, under 13, under 14, under 15.	12 Years and under 13.	13 Years and under 14.	14 Years and under 15.	15 Years and over.
1879				10,711	206	760	662	649	620	526	509	625	622	485	387	908	428	327	399	1,954
1880	,		,	10,943	905	773	693	614	631	591	494	505	598	611	463	383	782	416	316	2,128
1881				11,234	919	814	728	653	575	599	551	471	483	589	588	456	361	753	405	2,242
1882	,		,	11,699	1,109	792	734	665	618	558	564	534	460	478	601	292	441	361	730	2,457
1883	,			12,622	1,377	1,011	729	693	640	586	523	554	523	449	466	565	577	430	352	2,923
1884	1	,	,	12,880	1,071	1,234	936	710	654	612	567	919	538	508	444	455	554	566	420	3,078
1885		,	,	- 13,319	1,019	926	1,192	887	687	625	586	240	498	518	486	435	439	538	548	3,320
1886		,	,	. 13,804	1,104	939	934	1,130	857	658	617	929	526	487	513	483	417	434	523	3,636
1887			,	.   . 14,081	874	1,014	668	894	1,080	810	637	009	552	504	466	200	473	404	423	3,821
1888		,	,	. 14,261	948	858	951	865	843	1,034	771	622	583	541	501	458	483	460	393	3,959
1889		,		. 14,725	862	871	769	906	608	812	1,026	759	590	572	518	497	454	463	452	4,019
1890				15,264	1,335	780	796	717	888	768	767	696	736	572	557	511	473	445	446	4,211
1891	,			. 15,038	798	1,214	745	764	189	847	738	748	939	722	549	550	503	466	433	4,153
189-2			,	. 15,000	818	739	1,144	722	740	099	815	716	720	913	269	533	533	493	457	4,205
1893	,	,	,	. 15,126	99-2	753	691	1,107	889	711	647	789	695	707	968	691	523	522	483	4,128
1894	,		,	15,216	874	676	721	671	1,060	672	689	627	774	1129	693	885	675	515	513	4,150
1895	,	,		. 15,271	728	823	884	689	657	1,024	658	929	625	763	654	683	876	655	202	4,236
1896			,	. 15,326	867	672	787	098	675	639	1,007	646	629	609	744	649	699	859	643	4,256
1897				. 15,452	813	816	655	756	128	655	627	985	629	643	594	726	639	655	834	4,431
1898	٠	,		15,694	1,162	754	771	629	710	799	637	603	952	618	634	579	715	615	636	4,733
1899				15,765	1,074	1,022	705	733	598	229	770	624	282	924	611	609	564	989	709	4,860
1900	•		:	15,847	1,010	925	922	648	089	573	655	744	969	559	968	603	598	553	299	5,055
1901			1	- 15,977	1,116	921	875	878	640	099	544	634	724	576	550	884	595	290	549	5,238
1905		,		16,374	1,235	1,003	968	833	855	609	633	540	979	705	569	529	859	585	588	5,339
											,	000								

In excess of the authorised strength, 30.

#### APPENDIX IX.

The following is a list of the principal groups of anthropometric statistics, other than those mentioned in the Report, which have been collected in the British Isles since 1883.

1885. Galton. At the Health Exhibition Galton measured 9,337 of both sexes and various ages, including 4,726 adult males, and 1,657 adult females. (Jour. Anthropological Institute, Vol 14, pp. 205, 275.)

1886–1891. Galton. At the Anthropometric Laboratory, South Kensington, 3,678 persons, including 350 adult males, were measured. In this and in the previous case the persons measured were drawn from all classes and all

parts of the country. (Jour. Anth. Inst., Vol. 21, p. 32. Proc. Roy. Soc., Vol. 45, p. 135.)

1888. Venn. Venn published an analysis of the measurements of Cambridge students made up to that date. The number of persons measured was 1,450. (Jour. Anth. Inst., Vol. 18, p. 140.)

1901. Macdonnell and Garson. Macdonnell published an elaborate analysis of 3,000 criminals measured by Dr. Garson and his assistants. (Biometrika, Vol. I., p. 175.)

1902. Hay and Mackenzie. Six hundred children in Aberdeen and 600 in Edinburgh were measured by Drs. Hay and Mackenzie. ("Report of the Royal Commission on Physical Training (Scotland).")

#### APPENDIX IX.A.

TABLE SHOWING AGES, HEIGHT, WEIGHT, CHEST CIRCUMFERENCE, AND STRENGTH OF ACCEPTED AND REJECTED CANDIDATES FOR EMPLOYMENT IN THE SERVICE OF THE POST OFFICE, LONDON, IN THE YEARS 1876, 1881, 1886, 1891, 1896, 1901, 1903.

				Ex?	MINE	D.			A	VERAC	GE WE	EIGHT	in Poi	JNDS.						Av	ERAGE	CHEST	CIRCUM	FEREN	CE.					Av	ERAGI	E STRI (Lī	ENGTH		Pouni	s		AVE	RAGE I	Неідні	IN IN	CHES.	
YEA	ARS.			1	AGES.						1	AGES.						-				AG	ES.									A	GES.							Ages.			
		14	15	16	17	18	19	20	14	15	16	17	18	19 2	)	14		15		1	5		7	]	8	]	19	2	30	14	15	16	17	18	19	20	14	15	16	17	18	19	20
															a	1	,	a	ь	и	b	а	b	а	b	а	b	а	b							,							
1876 .		67	91	155	66	20	13		86	98	102	115	120	22 -	- 26	57 28	44 27	7.4	29.71	28.37	30.63	29.64	32.25	30.28	32.63	30.3	32.54	_		190	223	249	286	317	323	— ∫ ē	58.6	61.2	61.8	63.7	65.1	65.3	
1881: -		- 67	104	127	46	18	10	6	88	101	103	114	126	128 12	26.	49 28	46 28	8.02	29.9	28.65	30.59	29.24	31.2	30.66	32.13	30.62	33.52	30.7	32.87	211	240	251	277	312	308	317 5	58.1	61.2	61.8	64.9	66.3	65.6	65.7
1886		269	84	140	76	232	50	16	91	103	113	120	126	126 12	27 26	86 28	84 27	7.99	30	29.33	31.36	30.01	32.12	31.07	32.85	30.6	32.65	30.96	33.14	205	232	265	279	318	310	308 5	69.3	61.8	63.7	65.6	65.5	65.6	65.5
1891 -		- 33	49	99	64	228	98	19	93	103	112	122	127	133 15	21 26.	92 29	09 27	7.18	30.3	29.11	31.32	29.88	32.16	31.1	32.89	31.78	33.56	31.31	33.23	226	266	300	328	320	336	330 5	9.9	62.4	64.1	65.5	66.1	66.5	65.9
1896 -		. 6	5	35	16	224	64	36	114	111	113	128	127	131 15	25 29	25 31	41 29	9	30.9	28.88	31.12	31.93	33.08	30.84	33.1	31.17	33.42	30.41	32.84	274	268	325	367	397	400	381 6	82.8	64.2	64.3	67	66.5	66.8	66
1901		- 1	71	104	72	172	64	55	96	108	117	127	129	135 13	31 28	5 30	5 29	9.35	31.27	29.96	31.96	31.02	33.21	31.13	32.88	31.85	34.14	31.16	33.35	210	278	323	364	390 4	407	399   5	58	63.2	65.3	66.3	66.4	66.9	66.5
1903 -		- 13	36	42	33	137	19	14	90	110	116	128	127	141 13	39 27.	28 29	05 29	9.13	31.06	29.76	31.83	30.87	33.07	30.88	33 2	32.44	34.81	32.64	34.3	229	280	313	372	376	408	115 5	57.7	63.3	64.4	66.2	66.4	67:3	67.3

a At rest.

b After deep inspiration.

SUMMARY SHOWING AVERAGE HEIGHT, WEIGHT, CHEST CIRCUMFERENCE, AND STRENGTH OF ACCEPTED AND REJECTED CANDIDATES FOR EMPLOYMENT IN THE SERVICE OF THE POST OFFICE, LONDON, IN THE YEARS 1874-76.

		Ez	KAMINI	ED.				AVE	RAGE I	IEIGHT	IN IN	CHES.			AVER	AGE W	ЕІСНТ	in Po	unds.		Aver	age Ci	iest Ci	IRCUME	'ERENC	E IN <b>I</b> N	CHES.	_	AVERA	GE STF	RENGTH		ounds.	
			Ages.							Ages.							Ages.							Ages.							Ages.			
14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	2.)
946	605	895	449	153	97	-	57.6	60.4	62.17	63.9	64.8	65.5		86	97	106	116	123	128	_	25.69	27.14	28:35	29.39	29.93	30.3		203	231	272	300	312	328	

SUMMARY SHOWING AVERAGE HEIGHT, WEIGHT, CHEST CIRCUMFERENCE, AND STRENGTH OF ACCEPTED AND REJECTED CANDIDATES FOR EMPLOYMENT IN THE SERVICE OF THE POST OFFICE, LONDON, IN THE YEARS 1876, 1881, 1886, 1891, 1896, 1901, 1903.

		E	XAMIN:	ED.				Ave	RAGE I	Неіснт	' IN IN	CHES.			AVER	AGE W	EIGHT	IN Po	unds.		AVER	age Ci	HEST CI	RCUMF	ERENC	E IN IN	CHES.		Avera		ENGTH		ounds.	
			Ages.							Ages.							Ages.							Ages.							Ages.			
14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	20
456	440	702	373	1,031	318	146	59.06	62:04	63:1	65*5	66.1	66:4	66*4	90	102	109	121	127	131	129	b	b	$\begin{bmatrix} a \\ 29.06 \\ b \\ 31.12 \end{bmatrix}$	b	õ	b	b	207	247	278	316	355	362	373

#### APPENDIX IX.B.

MEMORANDUM BY MR. EDWARD W. HANCE UPON A RETURN AS TO THE WEIGHTS (AND HEIGHTS) OF BOYS ADMITTED TO THE TRUANTS' INDUSTRIAL SCHOOL AT HIGHTOWN IN THE CITY OF LIVERPOOL DURING THE YEARS 1893 AND 1903.

[Note.—This Memorandum and the Returns referred to therein did not reach the Committee in time to be noticed in their Report; the Summary Table is here printed together with the Memorandum.]

The accompanying returns relate to children admitted to the Truants' School at Hightown, established by the late School Board for Liverpool. That institution contains two distinct sections—for Protestant and Roman Catholic children respectively; and in addition to children from Liverpool itself, receives, so far as there is room, children from other districts—a preference being given (i.) to those from the adjoining districts, and (ii.) to those from other parts of Lancashire and Cheshire. For the purpose of comparison, the particulars have been taken for the last complete year (1903), and for the corresponding period ten years earlier. The particulars recorded with regard to each child comprise in both sections:—

- (a) Its exect age on admission,
- (b) Its weight on admission,
- (c) The period of its detention,
- (d) Its weight on leaving;

and, in the Protestant section

(e) Its height on admission.

These particulars have been tabulated in the present returns (i.) for each section, as well as (ii.) for each year, separately, and under headings relating to the main localities from which the children were drawn. The number of children admitted were—

Protestant section	166 in 1893 (	(from	Liverpool	88)
,, ,,	100 in 1903 (	, ,,	,,	74)
Roman Catholic section		\ //	,,	61)
	83 in 1903 (	(		58)

The particulars of all these are shown in the returns themselves; but for the sake of comparison the summary is restricted to the ages (nine and a half to twelve and a half) common to both sections in both years; and it embraces, therefore, only the following numbers—

Protestant section	145  for	1893 (	from	Liverpool	81)
	<b>74</b> for	,		,,	54)
Roman Catholic section		,		,,	56)
	62 for	1903 (			421

The total admission show a considerable falling off (sixty-six in the Protestant and fifteen in the Roman Catholic sections) between 1893 and 1903—mainly among the children from outside educational districts, a circumstance due, no doubt, to the opening of a new Truants' School in the midland counties. The numbers included in the summary show a still further reduction between the two dates, largely among the Liverpool children themselves; this is due to a relaxation (consequent upon the school age being raised from thirteen to fourteen) of the former rule which restricted the admission of children over twelve and a half years of age—with the result that seventeen Protestant and fifteen Roman Catholic boys over thirteen years of age were admitted in 1903 as compared with one Protestant boy in 1893.

In the returns and summary alike the children are grouped according to their last completed half year of age; as, however, scarcely a single child is ever admitted exactly on the day he completes such a half year, the particulars for each group show, in months, the total excess of the children in that group over the half year under which they are arranged. For example, the three Liverpool boys between nine and a half and ten years of age admitted to the Protestant section in 1893 had between them exceeded nine and a half years of age by five months or by an average of 1.6 months per child. In the returns these extra months do not in any way affect the calculations which give the actual figures for each group without any allowance for such excess. The same remark applies also to the summary until the "normal yearly increase" in weight (or height) shown by these particulars is calculated, but in this calculation, and in that (resulting therefrom) of the "normal weight" (or height) for each half

year of age (as well as in the application of these last particulars to the actual ages of the boys) due allowance needed to be, and has been, made for the excesses in question.

For the purposes of comparison with statistics of more general application, there have been inserted in the summary under the heading "Theoretical weight (or height) for the given age" particulars derived from statistics supplied from medical sources through Dr. Eichholz.

The most striking features shown by these returns appear to me to be—

- 1. The almost universal (absolute among the Protestants and with only two exceptions among the Roman Catholics) and, in most cases, serious, falling off of the actual as compared with the "theoretical' weight.
- 2. The striking and increasing inferiority in this respect of the Protestant children as compared with the Roman Catholic.
- 3. The extraordinary, and in the case of the Protestant children, almost phenomenal, improvement in the rate of increase in weight among the children while in the institution, compared with that among the same children before admission.

On each of these points it may be well for me to make a few observations.

1. If we take one child at each of the ages ten, eleven, and twelve, their combined "theoretical" weights would be  $214\cdot25$  lbs. The "normal" weights of an equal number of children of these particular ages committed to the Truants' School, would be.

Protestants  $186\cdot03$  lbs, in 1893 and  $185\cdot73$  in 1903. Roman Catholics  $193\cdot74$  in 1893 and  $197\cdot04$  in 1903.

These figures show that while the Roman Catholics at Hightown exceeded the Protestants by  $7 \cdot 71$  lbs. (or by  $4 \cdot 15$  per cent.) in 1893 and by as much as  $11 \cdot 31$  lbs. (or  $6 \cdot 09$  per cent.) in 1903, they fell short, even in the latter year, of the theoretical figures by no less than  $17 \cdot 21$  lbs. (or  $8 \cdot 03$  per cent.)

2. The difference between Protestants and Roman Catholics shown in the preceding paragraph results from a comparison of only three out of the seven age periods included in the summary; but it is confirmed by a similar comparison for the whole of the periods, which gives the following totals for what, for the sake of convenience, I may call a "complete group"—

Protestants  $434\cdot07$  lbs. in 1893, and  $433\cdot41$  in 1903. Roman Catholics  $452\cdot06$  in 1893, and  $459\cdot76$  in 1903.

The difference here in favour of the Roman Catholics is  $17 \cdot 99$  lbs (or  $4 \cdot 14$  per cent.) in 1893 and  $26 \cdot 35$  lbs. (or  $6 \cdot 08$  per cent.) in 1903. It will be observed that while the Roman Catholics show an improvement of  $7 \cdot 7$  lbs. in the ten years the Protestants show a slight falling off (  $\cdot 66$  lb.).

The corresponding figures for Liverpool alone would be.

Protestants 430 · 03 lbs in 1893 and 437 · 5 in 1903. Roman Catholics 442 · 13 lbs in 1893 and 456 · 45 in 1903.

Where the percentage in favour of the latter would be 2.81 in 1893 and 4.33 in 1903.

In 1893 the children from Liverpool—Protestants and Roman Catholics alike, were in physique below the average of the admissions to Hightown—the former to the extent of  $4\cdot04$  lbs. and the latter of  $9\cdot93$  lbs. for each "complete group;" but in 1903 the former showed an excess of  $4\cdot09$  lbs. and the latter a deficiency of only  $3\cdot31$  lbs. In other words, the Protestants of Liverpool showed an improvement during the ten years of  $7\cdot47$  lbs. per complete group against a deterioration of  $\cdot66$  lb. in the general average, and the Roman Catholics an improvement of  $14\cdot32$  lbs. against one of  $7\cdot7$  lbs. in the general average.

3. On the other hand the improvement during residence which was among the Roman Catholics at the satisfactory rate of 14.88 lbs. per annum in 1893, and at that of 13.73 in 1903, was among the Protestants at the extraordinary rate of 21.72 lbs. in the former and of 24.19 in the latter These figures bear eloquent testimony to the effect of judicious feeding! It is possible that the effect of improved diet and healthier surroundings is greatest during the first few months succeeding the change and that it would not continue indefinitely at the same rate; but so far as the Roman Catholics are concerned the results obtained here closely tally pro rata with those secured for a much longer period of residence and with regard to boys considerably older, at the Anerley School for the Deaf and The difference between the Protestants and Roman Catholics is probably due to a considerable extent to the greater "leeway" which the former had to make up; but it appears to indicate that their physical inferiority to the others as shown by these particulars does not arise so much from any inherent cause as, in some way not at present clear, from greater antecedent defects in nourishment. One explanation which has been hazarded, that the difference is due to the less general habit among Protestants than among Roman Catholics of mothers nursing their own infants, seems hardly sufficient, or to be quite consistent with the greater susceptibility to improved conditions displayed by the Protestant children. The same remark would seem also to apply to another explanation which would account for the difference by a difference of race, the Roman Catholics being mainly of Irish and the Protestants of English origin and the former having been town dwellers for fewer generations than the latter. The figures tend however, to confirm the accuracy of the "theoretical" weights; for they show that if the children of ten and eleven years of age were retained for twelve months in the institution, they would probably attain to or exceed the theoretical weight for their advanced age.

#### Protestant Children.

1	Q	0	2	

Normal Weight	Annual	Weight	Theoretical
at	Increase	at	Weight
$10 - 56 \cdot 25$		$11 - 77 \cdot 97$	72
	21.72		
11-62.01		12-83.73	$76 \cdot 75$

#### Roman Catholic Children.

Normal Weight	Annual	Weight	Theoretical
at	Increase	at	Weight
$10 - 60 \cdot 02$		11-74.9	72
	14.88		
$11 - 64 \cdot 58$		$12 - 79 \cdot 46$	$76 \cdot 75$

In conclusion I may remark that the contrast between the figures derived from Liverpool and those relating to the general average is certainly not due to any large importation of fresh blood into this city, and it can hardly be attributed to any other cause than to an improvement in the local conditions affecting the classes from which the children mostly come. This improvement is probably due not to any one circumstance but to the combined effect of a variety of causes; amongst which the most obvious appear to be (a) the extensive demolition of insanitary property which has been effected in Liverpool during recent years by the Corporation, (b) a considerable growth in the operations of the Liverpool Food and Betterment Association and similar agencies, and possibly (c) to some extent the efforts of the schools to disseminate elementary notions of hygiene and of the proper preparation of food. This latter cause is, however, probably more largely operative amongst classes from which this particular institution does not draw its inmates

The general results would appear to me to point to the following conclusions:—

- 1. That any inferiority in the children in this neighbourhood to the theoretical standard is due to imperfect nutrition and to defects in environment.
- 2. That it tends to diminish with an improvement in general local conditions, and
- 3. That it rapidly disappears under healthy surroundings and adequate nourishment;

and to afford some indications as to the forces which can be called into play not merely to check deterioration where it actually exists but to promote a general improvement in the physical conditions of the child population.

## EDWARD W. HANCE.

Education Office, Liverpool, 22nd July, 1904.

[Here follows the Summary Table.]

#### APPENDIX !

TOTAL.

LIVERPOOL EDUCATION COMMITTEL.

HIGHTOWN TRUANTS' INDUSTRIAL SCHOOL.

The content of the				THE POTTERIES.	YORKSHIRE TOWNS.	OTHER TOWNS.	401	Ab.	
Part	Liverpool Liverpool Distri	CT. LANCASHIRE AN	d Cheshire.	THE POTTERIES.				ge.	
State   Stat		Manufacturing Towns.	Mining Towns. Various other Districts.		ht. ' ht	<u>i</u> <u>ii</u> <u>ii</u> <u>ii</u> <u>ii</u> <u>ii</u>	ights. Weight Height	ght fo sar of car of large of	High Over Actual   Astual Haighte
	eight.  Weight.	Height.  fonths.  ys.  eights.  Weight.  Height.	Months. eights. Months. Aveights. Veights.	Months. Boys. Weights Weights Heights.	s Months f Boys. Weights age Weights rage Heights	of Boys.  al Weight al Height of Boys.  of Boys.	erage Weight erage Weierage Herenge Herenge Herenge er the give	For the Actual Age	De- France De-
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	100 20 8 493.0 017 00 110 1 051.5 60.87			17 105 1 2	07:2 19:11:5 4 5	3010111			
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Part	12 59 22 1,475.5 67 96 1 4 4.4 17 8 540.0 67.5	34 11 4 4 3 5 2 122 5 61 25 6 7		_ 1 69 69.0 4 6.5 4 6	5				
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Free lay regions:	100ai mononi de 100ai mononi d	1.3 lbs	- - - - -		16.44 ,,	-  -  -  -  -  -	- 21.72 "	_   _	
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129   54   3492	123 07 11				4 1 58 4 4	187 74 4,750	313 6-5	4750.0 313 6	37-23 37-23 11-73 11-73
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Normal yearly increase 4:44 lbs. — 997 — 5:2 lbs. — 210 — 5:2 lbs. — 281-25  Leaving weight 3702-5  Gain in weight 210-5  Total months' detention  Increase per month 186 lbs  210 — 348-75 — — — 5:2 lbs. — 210 — —  1 30 — —  1 30 —  1 30 —  1 30 —  1 30 —  1 30 —  1 30 —  2 4-192  1 86 lbs  2 1-6  2 1-7  3 3-48	129 04 040	NIS lis (1	613						
Leaving weight 3702:5 ,,  Gain in weight 210:5 ,,  Total months' detention 113  Increase per month 1:86 lbs.  21:6 ,,  22:6 ,,  23:48 ,,  24:192 ,,  24:192 ,,  24:192 ,,  24:192 ,,  24:192 ,,  25:10	Normal yearly increase 4 44 105.	_ 210							
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	Increase per month · 1.86 lbs.						24 102 33		
	21.6 ,,								k z

## INTER-DEPARTMENTAL COMMITTEE ON PHYSICAL DETERIORATION.

# LIVERPOOL EDUCATION COMMITTEE. HIGHTOWN TRUANTS INDUSTRIAL SCHOOL.

-		L	IVERPOOI	L.	L	IVERF	POOL DIS	TRICT.			LANCA	ASHIRE A	ND CI	HESHI	RE,		1	Отни	ER T	owns.		.,			Тотл	L.			
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12	30	11	770.8	70.7	8	5	357.2	71.24	9	2	152.7	76.35				_	5	1	99.7	99.7	52	19	1380.4	78.1	76.75	69.14	1333.42		46.98
$12\frac{1}{2}$	26	11	778.9	70.8	4	2	137.7	68.85				_			_		-	_	_		30	13	916:60	70.5		71.42	939.86	23.26	_
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11	21	5	351	70.2	5	3	§ 195	65	_			_	_		_	_	4	1	61.5	61.5	30	9	607.5	67:5	72.0	65.68	603:5	_	20.63
$11\frac{1}{2}$	15	6	414.75	69.12	5	1	67.75	67.75	_			_	_	-		_	-	-	_	_	20	7	482.5	68.9	_	68.17	485.43	2.93	
12	22	8	558.75	69.84	10	4	262.25	65.26		-	_	_	_	-	_			-			32	12	821.0	68.4	76.75	70.66	861.2	40.2	
$12\frac{1}{2}$	40	17	1291.25	76.0	8	3	228.25	76.08		-		_			-			-	-	-	48	20	1519.5	75.9	_	73.15	1482.9		36.6
	117	42	2993.75		36	13	864 25		10	5	319:25		4	1	61		4	1	61.5		171	62	4299.75				4299.75	61.23	61.23
Normal	l yearl	y inc	rease -	6.19	_	A. 1771		8.68		_	_	_		. —			-						5.66	]					
Leaving				3140-75		-	-	911.3		-		·-				_						-	4516.05						_
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17:	3Ap																												1

#### APPENDIX X.

## FUNCTIONS AND COMPOSITION OF THE "COMITÉ CONSULTATIF D'HYGIÈNE PUBLIQUE DE FRANCE."

Loi du 15 Fevrier, 1902, Art 25.—Le Comité consultatif d'hygiène publique de France délibère sur toutes les questions intéressant l'hygiène publique, l'exercice de la médecine et de la pharmacie, les conditions d'exploita-tion ou de vente des eaux minérales, sur lesquelles il est consulté par le gouvernement.

Il est nécessairement consulté sur les travaux publics d'assainissement ou d'amenée de l'eau d'alimentation des villes de plus de 5,000 habitants et sur le classement des

villes de plus de 5,000 habitants et sur le classement des établissements insalubres, dangereux ou incommodes. Il est spécialement chargé du contrôle de la surveillance des eaux captées en dehors des limites de leur département respectif, pour l'alimentation des villes. Le Comité consultatif d'hygiène publique de France est composé de quarante-cinq membres:

Sont membres de droit : le directeur de l'assistance et de l'hygiène publiques au ministère de l'Intérieur.

de l'hygiène publiques au ministère de l'Intérieur; l'inspecteur général des services sanitaires; l'inspecteur général adjoint des services sanitaires; l'architecte Inspecteur general des services sanitaires; l'architecte général adjoint des services sanitaires; l'architecte inspecteur des services sanitaires; le directeur de l'administration départementale et communale au ministère des Affaires étrangères; le directeur général des douanes; le directeur des chemins de fer au ministère du Commerce, des Postes et des Télégraphes; le directeur de l'enseignement primaire au ministère de l'Instruction publique; le président du Comité technique de santé de l'armée; le directeur du service de santé de la marine; le président du Conseil supérieur de santé au ministère des Colonies; le directeur des domaines au ministère des Finances; le doyen de la Faculté de médicine de Paris; le directeur de l'Ecole de pharmacie de Paris; le président de la Chambre de commerce de Paris; le directeur de l'administration générale de l'assistance publique à Paris; le vice-président du conseil d'hygiène et de salubrité du départment de la Seine; l'inspecteur général du service d'assainissement de l'habitation de la préfecture de la Seine; le vice-président du conseil de surveillance de l'assistance publique de Paris; l'inspecteur général des écoles vétérinaires; le directeur de la carte géologique de France.

Six membres seront nommés par le ministre sur une

Six membres seront nommés par le ministre sur une liste triple de présentation dressée par l'Académie des sciences, l'Académie de médecine, le Conseil d'État, la Cour de Cassation, le Conseil supérieur du travail, le Conseil supérieur de l'assistance publique de France.

Quinze membres seront désignés par le ministre parmi

les médecins, hygiénistes, ingénieurs, chimistes, légistes,

Un décret d'administration publique réglementera le fonctionnement du Comité consultatif d'hygiène publique de France, la nomination des auditeurs et la constitution d'une section permanente.

#### APPENDIX XI.

Appendix to evidence of Dr. Chalmers.

### TABLE A.

EXPECTATION OF LIFE AT CERTAIN AGES IN GLASGOW IN 1821-27, 1832-41, AND 1881-90.

(p. 39 of Life Table).

Name of the last o		MA	ALES.		FEMALES.							
Age.	(1) 1821–27.	(2) 1832–41.	(3) 1881–90.	Difference between (2) and (3).	(1) 1821–27.	(2) 1832–41.	(3) 1881–90.	Difference between (2) and (3).				
0	34·12		35.18		36.64	_	37.70					
10	42.27	37.40	44.32	6.92	45.24	39.94	45.44	5.20				
20	35.13	30.96	36.90	5.94	38.07	33.57	38.00	4.43				
30	29.40	24.90	29.68	4.78	31.23	26.90	31.31	4.41				
40	23.16	19.45	22.67	3.22	24.71	21.07	24.82	3.75				
50	16.86	14.53	16.65	2.12	18:31	15.86	18.50	2.64				
60	11.29	9.89	11.56	1.67	12.79	11.10	12.99	1.89				
70	6.75	5.95	7:51	1:56	7.93	6.88	8.69	1.81				

TABLE B.

AVERAGE ANNUAL MORTALITY PER 1,000 LIVING AT CERTAIN AGE-GROUPS IN GLASGOW.

	. 1		MA	LES.			FEM	ALES.	
$\mathbf{A}\mathbf{ge.}$		1832-41. (1)	1881–90.	1892–1900.	Difference between (2) and (3).	18 <b>3</b> 2-41. (1)	1881–90. (2)	1892–1900.	Difference between (2) and (3).
Under	5	106.6	86.2	77.5	8.7	99.2	75.5	67.2	8.3
,,	10	16.7	10.6	7.0	3.6	15.4	10.1	7.0	3.1
, ,,	15	7.7	5.5	3.8	1.7	7.6	5 <b>·3</b>	3.9	1.4
,,	20	10.8	7.2	5•6	1.6	7.7	7.1	4.9	2.2
,,	25		7.9	6.4	1.5	_	8.9	6.0	2.9
,,	<b>3</b> 5	_	9.3	8.2	1.1		10.9	8.5	2.4
,,	45	_	15.2	14.2	1.0	-	14.2	12.4	1.8
,,	55,	_	26.5	24.8	1.7	_	21.5	20.3	1.2
• ••	65.	_	45:8	45.5	0.3		38.4	37.7	0.7
,,	<b>7</b> 5	_	84.3	80.0	4.3	_	70.2	68.7	1.5
"	85	<u> </u>	149.0	144.5	4.5	-	123.7	129.8	,

CAUSES IN HOUSES OF SEVERAL SIZES.

	Census	All C	auses.	Zyn	notics.	Pht	hisis.	Respiratory Disease (including Croup).		
SIZE OF HOUSES.	Popula- tion.	Deaths.	Deaths. Death-rate per 1000.		Death- rate per 1000.	Deaths.	Death- rate per 1000.	Deaths.	Death- rate per 1000.	
1 Apartment	104,128	3,405	32.7	771	7.4	247	2.4	792	7.6	
2 Apartments	348,731	7,418	21.3	1,576	4.5	620	1.8	1,600	4.6	
3 Apartments	151,754	2,081	13.7	290	1.9	178	1.2	302	2.4	
4 Apartments and upwards -	136,511	1,533	11.2	139	1.0	99	0.7	272	2.0	
Institutions and Harbour -	20,588	1,072		88	_	152	_	235	_	
Not traced	-	207		10		48	_	41	_	
CITY (including Institutions and Deaths not traced) -	761,712	15,716	20.6	2,874	3.8	1,344	1.8	3,302	4 3	

TABLE D.

GLASGOW.—PERCENTAGE OF ILLEGITIMATE BIRTHS in four Districts where it is highest, and in four where it is lowest; also for the City as a whole, for the years 1898 to 1902.

	SANITARY DISTRICTS.	1893.	1899.	1900.	1901.	1902.
Hig	hest.		•			
3.	High Street and Closes W	12.6	13.9	14.4	13.5	10.9
6.	High Street and Closes E	15.0	15.3	16.4	10.9	12.4
12.	St. Enoch Square	18.0	14.0	13.5	22.5	13.6
14.	Bridgegate and Wynds	18.7	13.0	15.8	.8.3	5.9
$oldsymbol{L}$ ou	pe <b>st.</b>					
27.	Pollokshields W. and Bellahouston -	1.4	7.0	1.7	2.5	2.8
25.	Langside and M. Florida	2.0	2.8	1.8	2.0	1.9
23.	Govanhill	2.3	3.4	3.2	2.7	3.2
24.	Possilpark and Barnhill	2.9	2.2	3.6	3.7	3.7
ly.	CITY	6.1	6.4	6.2	6·1	6·1
	ths of Legitimate Infants per 1,000 egitimate Births	147	143	145	141	126
	ths of Illegitimate Infants per 1,000 legitimate Births	302	286	286	269	244

TABLE E.

GLASGOW.—DEATH-RATE FROM PHTHISIS IN THE SEVERAL QUINQUENNIA SINCE THE BEGINNING OF REGISTRATION AND FOR THE THREE YEARS 1900-1902.

Years.	Death-rate per million.	Year.	Death-rate per million.
1855—1859	3,742	1880—1884	3,140
1860—1864	4,094	1885—1889	2,601
1865—1869	3,972	1890—18 <b>94</b>	2,315
1870—1874	<b>3,90</b> 8	1895—1899	2,014
1875—1879	3,644	1900—1902	1,761

1

# APPENDIX XII.

Appendix to Evidence of Dr. Niven.

L-ANALYSIS OF AN INQUIRY INTO THE CIRCUMSTANCES OF 46 FAMILIES LIVING IN A VERY POOR DISTRICT OFF DEANSGATE.

TABLE I.

Occupations, at Different Ages.

The state of the s	65.	Charwoman. Hawker. Charwoman.	4	
	45.	Hawker, Hawker, Hawker,	4	
FEMALE.	35.	Charwoman. Maker-up. Hawker. Charwoman. Deputy (Lodging house).	10	
FBI	25.	Servant. Laundress. Finisher.	က	
	15.	deeler. Servant. Spinner. Spinner. Servant.	20	54 21 75
	14,		0	i I
	65	Labourer. Porter (Market).	S	Males Females
	45.	Joiner. Labourer. Labourer. Umbrella Maker. Hawker. Chip-Chopper. Lurryman. Hawker. Ticket Writer (C.L.H.). Hawker. Bricklayer. Hawker. Plasterer. Labourer.	14	
Male.	35.	Carter. Porter. Navyy. Nightsoil Labourer. Labourer. I.abourer. Nightsoil Labourer. Warehouse Printer? Warehouse Boatman. Fitter. Iron-dresser. Casual Labourer. Bride-setter's Labourer.	15	
W.	25.	Butcher. Slipper Maker. Umbrella Maker. Porter. Porter. Dock Labourer. Glass Blower. Navvy. Dock Labourer.	6	
	15.	Carter. Carter. Hooker. Warehouseman. Hooker. Porter. Nipper (Railway). Hawker. Labourer.		
	Ages—14.	Errand Boy. Nipper (Railway). Errand Boy.	ಣ	

 ${\bf TABLE~II.} \\ {\bf No.~OF~ROOMS,~WITH~PROPORTION~OVERCROWDED~OCCUPIED~BY~46~FAMILIES.}$ 

Class of House.	]	l Room.	2	Rooms.	3	Rooms.	4	Rooms.	5	Rooms.	6 Rooms.		
1		Over- crowded.		Over- crowded.		Over- crowded.		Over- crowded.		Over- crowded.		Over- crowded.	
Private Houses			14	3	1	1	14	_	2	_	1	_	
Common Lodging Houses	_					_		_		_		_	
Houses let in Lodgings.	13	8	1	1		_	_	_	_	_		_	
Total	13	8	15	4	1	1	14		2	_	1	_	

13 overcrowded out of a total of 46, all houses with not more than three rooms.

TABLE III.
INSANITARY CONDITIONS NOTED.

Private Dwellings In	ısanita	ıry.		Room's.	Lodging	H o	ouses,	Insa	nitary	7.		Rooms.
Back to Back, damp -		•	-	2	Disrepair, L. H	[,-		-	-	-	-	1
Disrepair, defective drains -			-	4	ditto	-		-			-	1
ditto ditto -	-		-	4	ditto	-		-	-		-	1
ditto ditto -	-		-	4	ditto		-	-	-		-	1
D.ains defective, closet defe	ctive		-	4	ditto	-	-	-		-	-	2
Disrepair, defective drains -	-	-	-	4	ditto	-	-	-	-	-	-	1
Disrepair, dirty	-	-	-	. 4	ditto	-	-	-	-		-	1
B. to B. damp, dilapidated	-	-	-	2	ditto	-	-	-	-	-	-	1
Drains defective	-		-	4	ditto	-	-	-		-	-	1
Yards dirty			-	5	ditto	-	-	-		-	-	1
Disrepair			-	6						_		
B. to B	-		-	2					Tota	.1 -	-	34
House dirty	-	-	-	1								
Short waste pipe			-	4								
ditto	-		-	4								
B. to B				2								
House dirty		-	-	1								
B. to B	-		-	2					,			
Yard covered, mall				2								
Living room floor broken .	-			2								
Disrepair			•	2								
House dirty	-			1								
ditto	-			2								
B. to B		/-		2								

	1	2	3	4	5	6	No. of Rooms.
	d. 334	d. 8	d. 6	d. 2	d. 7	d. 8 +	
	2	5		3 <del>1</del>	8		
	8 +	$3\frac{1}{2}$		8			
	8 +	5½ xxx		5		Waterwell .	
	$1\frac{1}{4}$	8	_	7	_	_	
	8 +	61/2	planting	$2rac{3}{4}$	_	-	
	8 +	8 +	•	8 +	_	_	
	8 +	$7\frac{1}{2}$		41	_		1
	8 +	8 +	-	6	_	_	
	7	3	_	6	_		
	4	$2rac{1}{4}$	_	8 +			
	8 +	$1\frac{1}{2}$	_	8 +	_	_	
-	_	$4\frac{1}{2}$	_	$7\frac{1}{2}$	_	<del>_</del>	•
£ .		8 +	_	$2\frac{1}{2}$		*******	1 1
	average.	0				_	
	6.2	41	_	average.	_	<del></del>	
	_			5.6		<del></del>	
		average.	_	_	_		
	-	5.2	_		-	_	
	2	4	-	4		Total 10.	Unable to provide diet at rate of $3\frac{3}{4}$ d.
	4	10	1	7	_	Total 22.	At rate of 7d.

<sup>\*</sup> Note.—For explanation, see "Remarks" after Table VIII.

TABLE V.

SIZE OF FAMILY IN RELATION TO THE DIET AVAILABLE.

1	2	3	4	5	6	7	8	9	10	No. in. Family.
d. 3	d. 7	d. 6	d. 8	d. 8	d. 8+	d. 2 <sup>3</sup> / <sub>4</sub>	d. 2	d. 5½		
-	6	8+	$3\frac{1}{2}$	8	41/4	_	7	6		
_	8+	34 _	$3\frac{1}{2}$	11/2	8+	_	5	_		
- /	2	$6\frac{1}{2}$	8+	8+	4	_	5			
- 1	8+	8+	71/2	41/4	_	-	_	_		
_	8+	8+	$4\frac{1}{2}$	_		<del>-</del>	_		!	
_	8+	$7\frac{1}{2}$	$2\frac{1}{2}$		_	_	_	_		
	8+	2	8	_	_	<u></u>	_			
	0	$1\frac{1}{2}$	- 1	_	_		-	_		
_	8+	-	- 1	_	_	_	-			
-	7	- 1	-	-	_	<del></del>		_		
	8	- 1	_	-	_		_			
1	12	9	8	5	4	1	4	2	Fami	ilies of different size. Total 46.
1	2	2	3	1	0	1	1	0	Unable	to provide diet at the rate of 3\frac{3}{4}d.  Total 11.
1	3	õ	4	2	2	1	3	2		Diet under 7d. Total 23.
3d.	$6\frac{1}{2}$ d.	$5\frac{3}{4}$ d.	5 <u>3</u> d.	6d.	6d.	2¾d.	4 <sup>3</sup> / <sub>4</sub> d.	5 <u>₹</u> d.	Average	diet per man in families f different sizes.

1

TABLE VI.

AMOUNTS SPENT ON RENT.

No of Rooms.

1	2	3	4	5	6
s. d. 4 6	s. d. 4 6	s. d. 4 6	s. d. 5 0 x	s. d. 6 4	s. d. 12 0
2 0	2 6		5 6 x	5 8	-
4 0 x	4 6 x	_	4 0		_
4 0	2 0		4 0		
4 6	3 9 b to b		4 6 x	-	_
5 0	3 6 b to b	_	4 6 x	_	
5 6	4 0		4 0 x	_	
5 0	3 6 b to b	_	5 3	<del></del>	
6 0	3 9	Manines	4 6	_	-
5 0	3 6	-	5 6	_	
5 0	3 0 x	_	2 0	_	Process
5 0	3 0 x	_	5 0		
4 6	5 6 x	manus.	4 6		quantum
_	<b>3</b> 6		4 6		
-	9 0 L.H.		Name of the last o	and distance.	-
Average 4s. 7d.	Average 3s. 11½d.	4s. 6d.	4s. 53d.	6s. 0d.	12s. 0d.

x Means that the rent is not regularly paid.

TABLE VII.

SPECIAL REASONS FOR POOR DIET OR OVERCROWDING.

No. of Family.	No. of Rooms.	Diet.	Reasons.
8	4	d. 2	Accident to father, two sons out of work (11, Irwell Court).
4	4	$3\frac{1}{2}$	Two workers (earnings 16s. ?)
7	2	5	£1 to 25s. earnings. Rent 4s. 6d.
9	2 x	5½	38s. (8s. spent on drink?), (4, Irwell Court).
9	3 x	6	32s. 6d. (23s. 6d. available for food?) (4, Back Quay Street).
2	1	2	Man a cripple, wife has diseased leg.
3	2 (2 lodgers)	3	Hawker, has two lodgers (husband dead).
3	2	214	Two boys, one out of work, mother weak, father dead.
5	2 L.H.	$1\frac{1}{2}$	Man has phthisis, mother underfed.
4	2	$4\frac{1}{2}$	Mother weak.
2	1 L.H.	8	3s. spent on drink. (??)
4	4	$2\frac{1}{2}$	One daughter delicate, father dead, son-in-law a lodger.
2	2	1	Charwoman at 66, sole support; husband dead.
3	1 L.H.	$1\frac{1}{2}$	Father fitter out of work, wife deputy C.L.H., son errand boy, both said to earn 8s. 6d. a week.
5	1 L.H.	8 x	Rent 6s. a week.
5	2 L.H.	$4\frac{1}{2}$	(? ?) Earnings £1 a week. Rent 9s.
4	1 L.H.	8 x	Husband lost leg, said to earn £1 on odd jobs.
6	1 L.H.	4	Baby is wasting, dock labourer, earns 15s. Rent 5s.
4	2	$3\frac{1}{2}$	Father dead, daughter a servant.

TABLE VIII.
SHOWING THE CONDITIONS AS REGARDS ILLNESS IN THE ABOVE 46 FAMILIES.

No. cf Fam'ly.	No. of Rooms.	Diet Scale.	lllness, &c.
8	4	d. 2	Family appear weak.
4	4	31/2	
-1	2	$3\frac{3}{4}$	Appear underfed.
7	4	$2\frac{3}{4}$	Child has died with bronchitis and rickets.
3	1	334	Wife appears underfed.
2	2	8	Wife has weak chest.
3	2	$6\frac{1}{2}$	Mother a cripple from fall.
3	. 4	8	Baby has had convulsions.
4	2	8	Man has rheumatism.
4	2	$7\frac{1}{2}$	Wife "delicate."
2	1	2	Man and wife tuberculous.
3	4	$7\frac{1}{2}$	Man has bronchitis, woman indigestion
2	2	8	Wife "delicate."
3	2	21	Woman has "bronchitis."
5	2	$1\frac{1}{2}$	Father tuberculous, child died of "waste."
4	2	$4\frac{1}{2}$	Mother has "bronchitis."
4	4	$2\frac{1}{2}$	Daughter, aged 36, "delicate."
3	1	8	Children appear scrofulous.
2	1	8	Wife "delicate."
5	1	8	Wife narrow-chested, probably tuberculous.
2	1	7	Wife has internal complaint.
6	1	4	Baby wasting.
2	1	8	Wife "delicate"—internal complaint.

#### REMARKS.

TABLE I. Shows that in this district the head of the family is, for the most part, a labourer or hawker,

Table II. This table shows that overcrowding is confined to the families occupying one, two, and three rooms, and is worst where the rooms are sub-let as lodgings.

Table III. Shows that disrepair is the principal sanitary defect noted, though there are also noted damp, dirt and defective drainage. Back-to-back houses are badly ventilated and the closet is a pail closet exposed to the public.

Table IV. Requires some explanation. I have constructed a number of diets from Sd. down to  $3\frac{2}{3}$ d. on which a man, doing moderate work, can be fed, fulfilling Atwater's Dietary. P. 125 grammes, F. 125 grammes, C. 425 grammes, or nearly so.

I have taken 3<sup>3</sup>d. as the lowest possible for sufficient diet. On this basis the greatest deficiencies are found in two and four roomed dwellings; the total number of households below the limit necessary for healthy life being eleven out of forty-six. See diet tables.

If we take 7d. as the limit, which we generally may, owing to the inability of families to choose a diet properly, there are twenty-three out of forty-six without sufficient food. It should be noted that the average diet available is considerably larger in one roomed occupancies than in two or four roomed houses.

From Table V. we see that in this district the deficiency of diet falls more heavily on those having three to five in the family than on those having six to nine, if we take the diet at  $3\frac{3}{4}$ d.; but more heavily on the larger families if we take 7d. as the limiting diet for efficiency. The importance of diffusing knowledge on this subject is thus illustrated.

take 7d. as the limiting diet for efficiency. The importance of diffusing knowledge on this subject is thus illustrated.

Table VI. Is not quite satisfactory. It is impossible to trace the effect of intemperance, except now and then, as in the fourth family shown. The effects of disease, slackness of work, death of the bread-winner are clearly shown. This table shows by a X where the rents are not regularly paid. This is most frequent in four roomed houses.

Table VII. Shows the relation of disease to the question of housing and food. All the one-roomed occupancies are in houses let in lodgings and we perceive that the ailing condition of the wife has much to do with the recourse to this class of dwelling. The prevalence of tuberculosis amongst these people is painfully in evidence.

Table VIII. More rent in proportion is paid for one room because this is let furnished. But it is remarkable how closely the rents of two roomed approximate to those of four roomed houses. The reason probably is that the former are scarce in this district.

II .-- ANALYSIS OF A SIMILAR ENQUIRY MADE INTO THE CIRCUMSTANCES OF FORTY-TWO FAMILIES IN ANGEL MEADOW,

TABLE I.

# Occupations, at Different Ages.

	65.	Cotton Opera-	1.
	45.	Charwoman Waste Sorter Straw Mat Maker Dressmaker Charwoman	ಚಿ
Female.	35.	Quilt Maker Furrier Hawker Cook Shopkeeper Hawker Shopkeeper Charwoman	× i
FB	25.	Umbrella Coverer Waste Sorter Ten n is Net Maker Nurse (Dom.) Hawker Laundress Ma- chinist	œ
	15.	Charwoman Printer's Ma- chinists [er Tobacco Work- Bolt Works Machinist Seamstress	rç.
	14.	Errand Girl	-:
	65.	Light Porter	i
	45.	Market Porter Street Musician Cleansing La- bourer Market Porter Furrier Market Porter Straw Mat. Manufac- turer Hawker Labourer Labourer Labourer Mason's La- bourer Gas Stoker Light Porter Market Porter Market Porter	17.
CB.	içe S	Flower Seller Builder's La- bourer Builder's La- bourer Labourer Book Hawker Labourer Cooper Hawker Bricklayer	11.
MALE.	25.	Warehouse Porter Market Porter Carter Corporation Labourer Railway La- bourer Hawker Hawker Labourer Steeple Jack Labourer Scavenger Whip Maker Carter	13.
	15.	Window Roller Manufac- twer Labourer Iron Turner Apprentice at Iron Works.	4
	Age — 14.	Errand Boy	1.

47	28
,	
,	
à	
٠	•
Males	Females

15

TOTAL

TABLE II.

NO. OF ROOMS, WITH PROPORTION OVERCROWDED, OCCUPIED BY 42 FAMILIES.

Class of House.	1 Room.		2	Rooms.	3	Rooms.	4	Rooms.	5	Rooms.	6 Rooms.	
		Over- crowded.		Over- erowded.		Over- crowded.		Over- crowded.		Over- crowded.		Over- crowded.
Private Houses			18	2	3		2	_		_	1	
Common Lodging Houses		_		_		_		-		_		
Houses let in Lodgings	14	3	2		1	_	1	_		_	_	
Total	14	3	20	2	4		3	- (d),	_		1	_

5 overcrowded out of a total of 42, none of which contain more than 2 rocms.

TABLE III.
INSANITARY CONDITIONS NOTED.

Private Dwellings Insanitary.	Rooms.	Lodging Houses Insanitary.	Rooms
Back-to-back, bad ventilation, pail closets close to doors and windows	2	Ill-ventilated	!
Back-to-back, ill-ventilated, closely confined, pail closets close to doors and		ditto	1
windows	2	ditto	1
Il-ventilated, dærk, dirty Il-ventilated	2	ditto	1
ditto	1	ditto	1
ditto	2	ditto	1
ditto	2	ditto	2
ditto	2	ditto	1
II-ventilated, confined	2	ditto	3
ll-ventilated, drainage defective	2	ditto	1
ll-ventilated, confined, drains defective .  ditto ditto	2	ditto	3
Confined, drains defective	2	ditto	4
ll-ventilated, dark	2	ditto	1
our pail closets under one of the bedrooms	3	Total •	- 37
ail closets adjoin living rooms, ill-ventilated and dark	2		
ll-ventilated, confined, close to pail closets	2		
ll-ventilated, close to pail closets	2	•	450
II-ventilated	3		110
our pail closets under bedroom	$\frac{6}{4}$		
ditto	4		

TABLE IV.

NO. OF ROOMS IN RELATION TO THE AVAILABLE DIET.

1	2	3	4	5	6	No.	of Rooms.
d. 2½	d. 2	d. 4	d. 8	***************************************	$\begin{array}{c} \text{d.} \\ 6\frac{1}{2} \end{array}$		
					$6\frac{1}{2}$		
8	5	$3\frac{3}{4}$	63	No relative to	***************************************		
8	$0\frac{3}{4}$	534	$7\frac{3}{4}$				
8	2			Affirmer			
8	4						
8	$4\frac{1}{2}$				_		
8	$2\frac{3}{4}$				-		
$7\frac{1}{2}$	8	_			_		
$2\frac{3}{4}$	$4\frac{3}{4}$	_		_	-		
$3\frac{1}{2}$	8	_					
8	31		-	-			
$7\frac{1}{4}$	$3\frac{3}{4}$			_	_		
$2\frac{1}{2}$	6			- Sierra - W	****		
4	$3\frac{1}{2}$			_	_		
8	$3\frac{1}{2}$			_			
_	$3\frac{3}{4}$			_			
	$4\frac{3}{4}$		age-ring system		Min.com		
_	48	-					
******	7		· governmen	_			
_	8			-	-		
$A \nabla ., 6\frac{1}{4} d.$	$A_{v.}, 4\frac{1}{2}d.$	Av., 4½d.	Av., 7½d.				
						Total.	
4	7					11	Unable to provide a diet at the rate of 3\frac{3}{4}d.
5	16	3	1	_	1	26	At the rate of 7d.

1

 $\begin{tabular}{ll} TABLE & V. \\ \\ SIZE & OF FAMILY & IN RELATION & TO & THE & DIET AVAILABLE. \\ \end{tabular}$ 

1	2	3	4	5	6	7	8	9	10	No. of Family.
d. 8	d. 4	d. 034	d. 5	d. 2½	d. 2	d. 7¾				
_	8	8	$4\frac{1}{2}$	314	2					
_	$4\frac{3}{4}$	43/4	33	$4\frac{3}{4}$	$2\frac{3}{4}$			<u>—</u>	_	
_	8	6	$3\frac{1}{2}$	$3\frac{3}{4}$	4		<del></del>		1 T	
_	8	$3\frac{1}{2}$	7	$6\frac{1}{2}$	$3\frac{3}{4}$	_				
_	8	8	$6\frac{3}{4}$	53			_			
	8	$2\frac{3}{4}$	$2\frac{1}{2}$	4					-	
	8	8						_		4
	$7\frac{1}{2}$	_		_			_		_	,
	$3\frac{1}{2}$								_	
	8		Martine and							
	74	_				_			_	
_	8			_		<del></del>	_	_		<del></del> .
1	13	8	7	7	5	1			Families o	f different size. tal 42.
0	1	3	2	2	3	0	_	$\begin{array}{c} \text{Below } 3_{4}^{2}\text{d.} \\ \text{Total } 11. \end{array}$		
0	3	5	6	7	5	0	_	Below 7d. Total 26.		
8d.	7d.	$5\frac{1}{4}$ d.	4 <sup>3</sup> / <sub>4</sub> d.	$4\frac{1}{4}$ d.	3d.	7¾d.	_	Avera diffe	ge diet per rent sizes.	er man in families of

TABLE VI.

# AMOUNTS SPENT ON RENT.

Rooms.					
1	2	3	4	5	6
s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
3 6 b to b	3 6 b to b	3 8 b to b	5 0		6 4
5 0 b to b	3 6 b to b	4 0	4. 9	·	
4 0 b to b	3 6 b to b	5 6	6 0		
5 3 b to b	3 6 b to b		<del></del>	Windows.	
5 0	3 6 b to b				
4 8	3 6 b to b			and the same of th	
4 8	3 6 b to b			_	-
5 0	3 6 b to b	_		_	
5 3	3 6 b to b	_	10 Million 1 Mills		
4 8	4 0 b to b		_	_	**** Name
4 8	4 0 b to b		Named to reduce		
2 0	3 6 b to b	_		_	
4 8	3 6 b to b			NATIONAL PROPERTY.	ANIMAN
5 0	3 8 b to b				_
2 0	3 8 b to b		-	_	
_	3 8 b to b				
_	3 8 b to b				
_	3 8 b to b		-		
	5 0 b to b		_	· —	
s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Average: 4 4	3 9	6 7	$7 \ 10^{\frac{1}{2}}$	_	6 4

b to b signifies back to back

TABLE VII.

SPECIAL REASONS FOR POOR DIET OR OVERCROWDING.

No. of Family.	No. of Rooms.	Diet.	Reasons.
6	2	d. 2	Earnings 10s. to 16s. weekly.
4	2	5	Earnings 13s. to 15s. weekly.
3	2	03	Earnings 5s. to 12s. weekly. Wife has rheumatism.
6	2	2	Earnings 10s. to 15s.
2	2	4	Earnings 9s. to 12s. for two workers.
5	1	214	Husband in prison. Wife earns Is a day covering umbrellas at 4½d per doz.
4	2	$4\frac{1}{2}$	Husband out of work. Wife earns about 10s. per week.
6	2	$2\frac{3}{4}$	Man and wife together earn 14s. to 18s.
3	2	43	Mother and two daughters earn 11s. weekly.
5	2	31	Son out of work.
4	2	$3\frac{3}{4}$	Hawker and wife earn 13s. to 24s.
3	2	6	Man and wife earn 15s, to 21s.
4	2	$3^1_2$	Man earns 10s. to 20s
.6	3	4	Earnings of father 15s. to 20s. (Married son assists family.)
3	2	31	Three persons earn 6s. to 8s. total.
6	2	33	Man and wife earn 14s. or 15s.
2	2	$4\frac{3}{1}$	One earns 6s. to 8s. Another out of work.
5	2	$4\frac{3}{4}$	Man and wife earn 15s. to 20s. Man drinks.
5	3	$3\frac{3}{4}$	Two workers earn 16s. weekly.
3	1	$2\frac{3}{4}$	Father earns 10s. to 20s. (Out of his usual work.)
2	1	$3\frac{1}{2}$	Man and wife earn 10s. to 25s. (Renti4s. 8d.)
4	4	$6\frac{3}{4}$	Man and two children earn 22s. Mother ill.
5	3	$5\frac{3}{4}$	Man earns 20s. to 25s.
4	1	$2\frac{1}{2}$	Man and wife earn 12s. to 18s.
5	3	4	Man earns 12s. to 15s. (Out of his usual work.)

TABLE VIII.

SHOWING THE CONDITIONS AS REGARDS ILLNESS IN THE ABOVE 42 FAMILIES.

No. of Family.	No. of Rooms.	Diet Scale.	Illness, etc.
6	2	d. 2	Wife "delicate."
3	2	$0\frac{3}{4}$	Wife suffers from rheumatism.
6	2	2	Confinement six months ago.
6	2	$2\frac{3}{4}$	Confinement five months ago.
4	2	$3\frac{3}{4}$	Confinement four months ago.
6	3	4	Eldest daughter appears delicate. A son has chorea.
5	6	$6\frac{1}{2}$	Mother seems delicate. Confined six months ago.
4	4	$6\frac{3}{4}$	Mother suffers from "bronchitis."
5	3	4	Confinement three weeks ago.
7	4	$7\frac{3}{4}$	Son had pleurisy a few months ago.

#### REMARKS.

The second district to which a report relates is partly in Angel Meadow on the North of the Manchester Township. This district contains many common lodging houses of a low type.

The number of houses taken was 42.

These contained (Table I.) 75 workers whose occupations are given.

Insanitary conditions were found in connection with 37 houses (Table II-). In fact 23 of the houses were back to back, and these are, *ipso facto*, insanitary.

As in Deansgate, overcrowding is confined to the smallest houses, or to rooms sublet (Table III.). The amount of overcrowding here is, however, comparatively small.

From Table IV, we see that the best diet falls to those families living in one furnished room. Those having 2 or 3 rooms fare much worse.

The average diet here is lower than off Deansgate.

From Table V. we see that the families are not large, and that in this district the depth of destitution increases with the size of the family.

Table VI. shows lower rents than in Deansgate and the difference in rents between two roomed and four roomed houses is here quite marked.

Table VII. gives an idea of the reasons causing poor diet and overcrowding.

Table VIII. shows a comparatively small list of illnesses. 
The tendency is to tuberculosis and heart disease.

It will be noted that out of the above 42 households 11 are unable to get a diet on the scale of 33d. per man; 19 are starving, except for help; while 26 are unable to live at the rate of 7d. per man, which in their ignorance of foods probably means insufficiency.

III.-ANALYSIS OF A SIMILAR ENQUIRY INTO THE CIRCUMSTANCES OF 48 FAMILLES IN ANCOATS.

TABLE I.

Occupations at different Ages.

	30	man		
	65.	Charwoman	67	
	45.	Charwoman Charwoman Seamstress Paper Bag Maker Charwoman Tailoress Cotton Reeler Hawker Charwoman Hawker	10	
FEMALE.	30°.	Charwoman Charwoman At Glass Works Charwoman	4	
E E	25.	Machinist Kitchen Maid Furniture Polisher Tobacco Worker Charwoman Charwoman Charwoman Charwoman Charwoman Charwoman Charwoman Charwoman Rag Sorter Toy Maker Cigar Maker Fishing Tackle Maker Hawker	12	
	15.	Machinist Paper Sorter Waste Sorter Rag Sorter Charwoman Cotton Piecer	9	(
	14.		0	
	65.	Hawker	-	
	45.	Labourer Navy Painter Labourer Market Porter Firewood Cut- ter Market Porter Labourer Bricklayer Warehouse Porter Railway Porter Coal Heaver	12	
MALE.	35,	Builder's Labourer Labourer Slipper Maker Cats Meat Dealer Scavenger Night Watchman Railway Porter ter Boot Maker Builder's Labourer	6	
M	25.	Railway Labourer Hawker Print Sorter Furniture Polisher Blacksmich Market Porter Railway Porter Hawker Soavenger Labourer Builder's Labourer Builder's Labourer Hawker Builder's Labourer Hawker Builder's Labourer Hawker	15	
	15.	Cabinet Maker Checker Labourer Trolley Boy Brush Maker Labourer Corporation Labourer Toy Maker Garter Hawker Glass Worker Glass Worker Glass Worker Stone Mason	14	
	Ages - 14.	Nipper Nipper	63	

Total

TABLE II.

No. OF ROOMS, WITH PROPORTION OVERCROWDED, OCCUPIED BY 48 FAMILIES.

Class of House.	. I Room.		2 Rooms.		3 Rooms.		4 Rooms.		5 Rooms.		6 Rooms.	
		Over- crowded.		Over- crowded.		Over- crowded.		Over- crowded.		Over- crowded.		Over- crowded.
Private Houses			30	4			10	_			_	
Common Lodging Houses						_						_
Houses let in Lodgings.	6	2	2	_			_	_				
Total	6	2	32	4	_	_	10	_		_		

6 overcrowded out of a total of 48.

TABLE III. INSANITARY CONDITIONS NOTED.

Private Dwellings Insanitary.	Rooms.	Lodging Houses Insanitary.	Roon
Ill-ventilated	2		
ditto and confined	4		
ditto	2		
ditto and confined	4		
ditto	2		
ditto	2		
ditto	2		
ditto and confined	4		
ditto	2		
ditto	2		
ditto	2		
ditto - · · · - · ·	2		
ditto - *	2		
ditto	2		3
ditto	2		
ditto	2		
ditto	2		
onfined and ill-ventilated at back	4		
ditto ditto	4		
ll-ventilated :	2		
ditto	2		
ditto	2		
ditto	2		
ad repair	4		
l-ventilated	2		
onfined and ill-ventilated	4		
l-ventilated	2		
ditto	2		
onfined and ill-ventilated at back	4		
	32		

TABLE IV.

NUMBER OF ROOMS IN RELATION TO THE AVAILABLE DIET.

	1	1	1		1	
Rooms.	2	3	4	5	6	
d.	d.		d.			
d. 8	d. 2½	***************************************	$\begin{array}{c} \text{d.} \\ 2\frac{1}{4} \end{array}$		_	
.8	8		8	_	-	
$2\frac{1}{4}$	$3\frac{1}{2}$	_	51	_	-	
8	$7\frac{1}{2}$	_	$3\frac{1}{2}$		_	
.7	8		8	-	_	
$3rac{3}{4}$	$4\frac{3}{4}$		8	_	_	
_	6		8	_	_	
	8		8	_		
	$2rac{1}{2}$		8	roman.	_	
_	5	_	$5\frac{3}{4}$		_	
· · · · · · · · · · · · · · · · · · ·	8			_	_	
	$4\frac{3}{4}$	_				
	8		_	-		
_	$2\frac{1}{2}$		_	_		
_	5 <del>1</del>	_	_	_		
	71/4					
<del></del>	4	_	_	_		
***************************************		_				
_	$4\frac{1}{2}$	_		_		
	31/4	_	-			
	6		_	_	***	
	$6\frac{3}{4}$	_	_	_		
	8			-		
_	$3\frac{1}{2}$					
	$2\frac{1}{2}$		_			
	33		- Printerson		words .	
<del></del>	5	-	<del></del>	<del>-</del>	*****	
	4	diaments.			_	
-	71/4	_				
	8		Managan cospe			
	$4\frac{3}{4}$			_	_	
	8			-	,—	
-	4	-		_		
Average	$\begin{array}{c} \text{Average} \\ 5\frac{1}{2} \end{array}$		$rac{ ext{Average}}{6rac{1}{2}}$			
1	7	-	2		Total 10.	Jnable to provide a diet at the rate of 3\fmaterial d.
2	21	1 -	4		Total 27.	At the rate of 7d.

TABLE V. SIZE OF FAMILY IN RELATION TO THE DIET AVAILABLE.

1	2	3	4	5	6	7	8	9	10	No. of family.	
d. 8	d. 2 <del>1</del>	d. 3½	$\frac{d.}{4\frac{3}{4}}$	d. 21/4	d. 6 <del>3</del>	d. 6	d. $5\frac{3}{4}$		_		
$3\frac{1}{2}$	8	8	21/4	$3\frac{1}{2}$	5.	_	$3\frac{1}{4}$	_		_	
	8	5	$5\frac{1}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$	_	_	_	_		
_	7 <del>1</del>	8	$2\frac{1}{2}$	74					_	_	
_	8	$5\frac{1}{2}$	8	8	No.						
	8	74	$4\frac{3}{4}$						_	_	
_	21/2	6	4	_					_		
*****	$2\frac{1}{2}$	8	8		-		_	Promount		_	
-	334	4	8							_	
_	8	8	8	_			<del></del>			_	
	$3\frac{3}{4}$		7			AMA: -F	_				
_	8	_	8	_			_	_	_	_	
-			4				<u> </u>		_		
2	12	10	13	5	3	1	2	Numbe		ilies of different size.	
1	3	1	2	2		_	1	Number without possibility of sufficient food at $3\frac{3}{4}d$ . per man.  Total 10.			
1 .	5	5	7	3	3	1	2	Number at less than 7d. per man Total 27.			
5·8d.	5·9d.	6·3d.	5·7d.	5·1d.	5.2d.	6d.	4·5d.	Average diet per man in families of different size.			

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TABLE VI.

AMOUNTS SPENT ON RENT.

				1	
Rooms.	2	3	4	5	6
s. d.	s. d.		s. d.		
5 3 L	2 10 b		4 .0	_	
5 3 L	2 7 b		4 4	*******	_
5 6 L	7 0 L	-	5 6	_	
4 8 L	7 6 L	_	5 6		
6 0 L	3 0 b		4 6	- Chinada	<del>-</del>
4 8 L	3 0 b	_	4 3	_	-
_	2 9 b		4 3		
_	2 10 b	_	4 9		
_	2 10 b	_	3 3	_	_
-	3 6 t	_	1 3	-	-
-	3 2 b	_	-	_	-
-	3 1 t	_	-	_	
	3 6 b	-	_	- Committee	-
_	3 6 b	and the second second	_	_	
	3 1 t				
	2 7 b	_		_	_
_	2 10 b	_	_	_	-
_	2 10 t	_		_	<del>-</del> -
	3. 0 p	_	-	_	<u> </u>
No. of Street,	3 0 b			_	
_	2 9 b			-0-0-0-	
-	3 9 b	-	_	-	<del>-</del>
<b>~</b> .	2 7 b	<del>-</del> .		<del></del> -	~
-	2 6 b			_	-
	2 7 b	_	_	_	-
	3 9 b			_	-
	3 6 b	_	-		-
	3 9 b	_		_	
-	2 9 b	_			
	3 9 b		-	_	-
-	3 0 b	_		_	-
-	3 2 b	_			
Average 5s. 3d.	Average 3s. 4d.	_	Average 4s. 5½d.		. –

L=Rooms let in lodgings.

b=Back to back.

t=Through house.

TABLE VII.

SPECIAL REASONS FOR POOR DIET OR OVERCROWDING.

No. of Family.	No. of Rooms.	Diet.	Reasons.
2	2	d. 2½	Mother and daughter earn 6s. weekly.
5	4	$2\frac{1}{4}$	Daughter out of work, son earns 10s.
3	2	3½	Three persons earn 17s. in winter.
4	2	434	Father out of work, mother and son earn 17s.
4	1	$2\frac{1}{4}$	Father cuts firewood, 10s. weekly, and pays 5s. 6d. for one room.
8	4	53	Three persons earn 29s. weekly.
4	4	51/4	Two persons earn 17s. 6d. weekly.
7	2	6	One person earns 22s. weekly.
5	4	31/2	Father and mother earn 15s. weekly.
4	2	$2\frac{1}{2}$	Father earns 9s.
3	2	5	Two daughters earn 14s.
4	2	$4\frac{3}{4}$	Son earns 7s. Not known what father earns? 13s.
$_2$	2	$2\frac{1}{2}$	Two persons earn 7s. 6d. (Rent 3s. 6a.)
3	2	51/2	Soldier sends 8d. per day home, and Government allows 1s. 1d. per day (Rent 3s. 1d.)
4	2	4	Father earns 13s.
.5	2	$4\frac{1}{2}$	Man and wife earn 14s.
8	2	$3\frac{1}{2}$	Man earns 14s.
3	2	6	One son in hospital, and one out of work. When working 17s. weekly.
6	2	$6\frac{3}{4}$	Father earns 10s. in winter.
1	2	31/2	Earnings 5s. 6d. weekly. (Rent 2s. 7d.)
2	2	21/2	Mother earns 6s. to 8s. Husband does nothing.
2	2	$3\frac{3}{4}$	Man earns 8s. Wife broke ankle and cannot work.
6	2	5	Man earns 20s.
4	2	4	Daughter earns 14s. Father does the housework.
4	1	7	One person earns 20s. (Rent 6s.)
5	2	71	Four persons earn 30s. A son out of work.
2	1	334	Earnings 10s. weekly. (Rent 4s. 8d.)
6	2	$4\frac{3}{4}$	Father earns 18s.
4	2	4	Mother and son earn 11s.

TABLE VIII.

SHOWING THE CONDITIONS AS REGARDS ILLNESS IN THE ABOVE FAMILIES.

No. of Family.	No. of Rooms.	Diet.	Illness, &c.			
1	2	<b>d.</b> 8	Rheumatism for a month.			
4	1	$2\frac{1}{4}$	Mother has a bad foot through accident.			
7	2	6	Child ruptured; has been in hospital.			
5	4	$3\frac{1}{2}$	Confinement eight months ago.			
3	2	8	Grandmother (lives here) ill at present.			
3	2	6	Son, aged 17, in workhouse hospital with pneumonia.			
6	2	63	Confinement six months ago.			
2	2	$2\frac{1}{2}$	Father (aged 73) not able to work.			
2	2	$3\frac{3}{4}$	Wife broke ankle five months ago.			
4	1	7	Confinement three months ago.			

#### REMARKS.

The third district in which an investigation has been made is a part of Ancoats in the Manchester Township. The portion of the Ancoats district enquired into contains no common lodging houses and only a small number of houses let in lodgings.

The number of houses taken was forty-eight.

These contained (Table I.) eighty-seven workers whose occupations are given.

Insanitary conditions were found in connection with thirty-two houses (Table II.) and twenty-sixof the houses were back-to-back.

As in Deansgate and Angel Meadow overcrowding is confined to the smallest houses, or to rooms sublet.

Here again, however, the amount of overcrowding is small (Table III.).

In Table IV. we find that out of six families occupying tenements of one room three were able to provide an 8d. diet and one a 7d. diet. The average, however, only allows a 6d. diet, this being lower than that in the other two districts mentioned.

The average diet for all the families is higher than in either Deansgate or Angel Meadow.

In Table V. we see that the families are not large, and that the depth of destitution in creases with the size of the family. This is not so marked, however, as in the Angel Meadow district.

Table VI. shows that the rents for the two roomed and four roomed houses are lower than in Deansgate or Angel Meadow. The difference between the rents of two roomed and four roomed houses in Ancoats is less marked than in Angel Meadow.

Table VII. gives an idea of the reasons causing poor diet and overcrowding.

Table VIII. shows a remarkably small list of recent illnesses.

Out of the forty-eight households, ten are unable to get a diet on the scale of 3\frac{3}{4}d. per\frac{1}{2}man, while twenty-seven are unable to live at the rate of 7d. per man.

IV .- TABLE SHOWING DEATH RATES FROM PHTHISIS IN MANCHESTER IN AGE GROUPS.

Years.	All Ages.	5	5—	10	15	20—	25—	45—	65
1881—1890	2.32	0.48	0.36	0.58	1.76	2.62	4.12	3.55	1.61
3 Unions: Manchester, Chorlton and Prestwich.									
1891–1895	2.09	0.36	0.37	0.43	1.47	1.91	3.74	3.57	1.39
1896–1900	97	0.45	0.31	0.41	1.25	1.73	3.42	3.94	2.33
1901	2.09	0.28	0.37	0.44	1.04	1.82	3.43	4.29	1.56
1902	2.08	0.29	0.35	0.49	1.07	1.63	3.22	4.49	2.84
1903	1.85	0.34	0.24	0.50	1.02	1.52	2.88	3.78	2.50

This table shows a considerable reduction in the total death-rate from phthisis in the twenty-three years, 1881-1903, interrupted by a slight increase in the years 1901, 1902. At ages under 5 a reduction is manifest in the last three years. At ages 5-9 no steady improvement is apparent. At ages 10-14 the last three years show retrogression. On the whole, at school ages there has been an increase in the death-rate during the last three years. On the other hand, at ages 15-19, 20-24, and 25-44, a decided improvement is manifest. At ages above 45 the death-rate from phthisis has increased. It should be observed that less importance attaches to the death-rate from phthisis at the earlier than at the later ages. The total death-rate is so small that errors in diagnosis (which are more likely to occur at the earlier stages) would have a much greater effect on the rate at the earlier ages. With this caution, it may be said that the figures show a decided improvement at ages under 5, a tendency to retrogression at school age, a marked improvement in adolescents and adults, and an inclination to retrogression at advanced age.

V.—TABLE SHOWING THE NUMBER OF DEATHS UNDER 1 YEAR PER 1,000 BIRTHS OF LEGITIMATE AND ILLEGITIMATE INFANTS RESPECTIVELY.

Year.	Legitimate.	Illegitimace.
 1891	184	375
1892	170	367
1893	190	498
1894	150	338
1895	193	395
1896	167	375
1897	187	374
1898	187	401
1899	196	425
1900	179	432
1901	188	463
1902	147	263

#### APPENDIX XIII.

Appendix to Evidence of Mr. Shirley Murphy.

# EXTRACT FROM MEMORANDUM WITH TABLES OF FIGURES.

I have no other test of the physical condition of the population than that of its ability to resist disease and death; but dealing in this way with London as a whole, the statistics available show that progress is being made.

Thus the death rate of the London population has for a long period been steadily decreasing, as will be seen from the following table:—

Period.	Death rate.
1841–50	24.8
1851-60	23.7
1861-70	24.4
1871-80	22.5
1881-90	20.5
1891-1900	19.2
1901	17.1
1902	17.2
1903	15.2

The following figures extracted from life tables relating to three decennia, further emphasise this fact.

MALES.

Expectation of life, at particular ages, in years.

Age.	1861–70.	1881-90.	1891–1900
0		39.9.	41.0
5	47.5	50.4	51.6
10	44.6	46.8	47.8
15	40.1	42.4	43.4
20	36.7	38.3	39.1
25	33.1	34.2	35.0
35	26.3	26.9	27.3
45	20.3	20.4	20.7
55		14.6	14.8
65		9.7	9.8
75		5.8	5.9

The figures relating to females are in the same direction.

With respect to the physical condition of the poorer classes of the population, I have again no other test than that afforded by their ability to resist disease and death, compared with the corresponding ability of the classes better circumstanced.

The sanitary areas of Southwark and Hampstead may be taken as illustrative of a poor and of a well-to-do district, and the following figures showing the expectation of life in the two districts enable comparison to be made between them in respect of viability.

Males.

Expectation of life, 1897-1900.

Age.	Hampstead.	Southwark.		
At birth.	50.8	36.5		
5	57.4	48.7		
10	53.3	45.0		
15	48.7	40.6		
20	44.2	36.4		
25	39.8	32.4		
30	35.5	28.6		
35	31.3	25.0		
40	. 27.5	21.9		
45	23.8	18.9		
50	20.3	16.2		
55	17.0	13.6		
60	14.1	11.3		
65	11.5	9.1		
70	9.2	7.0		
75	7.1	5.2		

Further opportunity is given of comparing the deathrates of populations differing in social condition, by grouping the London sanitary areas according to the proportions of population occupying tenements of less than five rooms to the extent of more than two persons to a room.

Me	etro	polita	n Bor	ough	•			Proportion of total population living more than two in a room in tenements of less than 5 rooms.	Proportion of total population living in tenements of 1 and 2 rooms.
Lewisham -	-		-	-	•	-	~	2.67 %	4.8%
Wandsworth -	-	-	-			-	-	4.46 %	5.6 %
Stoke Newington	-	-	-	-	-	-	-	5.52 %	10.1 %
Hampstead -	-	-	-		-		-	6.37 %	11.1%
Woolwich -	-	-	-		-	-	-	6.60 %	11.0%
Greenwich -	-	-	-	-	-		-	8.30 %	10.3%
Deptford -	-	-	-807		- 0			9.06%	13.0 %
Camberwell -	-	-	-		-			9.65 %	12.9 %
Hackney -	-	-	-		-		-	10.18 %	14.4 %
City of London	-	-	-	-	-	-	-	10.85%	19·3 %
Fulham -	-	-	-				-	10.85 %	13.0 %
Battersea -	-	-	-		-	-	-	10.89 %	15.2%
Hammersmith	-	-	-		-		-	11.76%	17.0 %
ambeth -		-	-		-		-	12.22 %	19.6 %
Vestminster -	-	-	-		-		-	13.03 %	24·3 %
addington -	-	-	-			-	-	13.57 %	22·1 %
helsea -	-	-	-			-	-	14.43 %	25.0 %
Kensington -		-	-		-	-		14.84 %	22·1 %
oplar -	-	-	-	- 15	· _ (6)	-	-	16:41 %	17.9 %
slington -	-	-	-	-	-	-	-	17.00 %	27.4 %
Sermondsey -		•			•	-	-	19.66%	25.4%
t. Marylebone	-	-				-	-	21.12%	34·4 %
outhwark -	-	-	-	-	-	-	-	22.35 %	31.6%
t. Pancras -	-	-	-		-		-	23.98 %	37.9 %
Tolborn -	-	-	-		-	-	-	25.05%	37.5 %
ethnal Green	-	-	-		-	-	-	29.62%	31.7 %
horeditch -	-	-			-	-	-	29.95%	37.2%
tepney -		-	-				-	33.21 %	33.8 %
insbury -		-	-	5.0 <del>-</del>		-	-	35.22 %	45.2%

# LONDON.

### All Causes and Phthisis.

1901-3.

Proportion of total population living mere		Death-rate per 1,000 living.								
than two in a room in tenements of less than five rooms.		All causes	3.		Phthisis.					
(Census, 1901).	1901.	1902.	1903.	1901. 1902. 1903						
Class 1—(0-7½%)	13.22	13:49	12.02	1.09	•99	•95				
,, 2—(7½–10%)-	15.24	15.30	13.35	1.36	1.31	1.21				
" 3—(10–12½%)	16.61	16:33	14:39	1.54	1.49	1.36				
,, 4—(12½—15%) · ·	15.39	15.73	13.82	1.51	1.40	1.38				
,, 5-(15-20%)	18.08	18.10	16.18	1.64	1.63	1.56				
,, 6—(20–25%)	19.04	19.52	16.93	2.10	2.15	2.03				
,, 7 -(25% and up) -	20.95	21.03	18.65	2.20	2.04	2:25				

1901.

Proportion of total population living in tenements of one and two rooms.	Death-rate pe	Death-rate per 1,000 living.				
(Census, 1901.)	All causes.	Phthisis.				
Class 1—(0-12%)	13.42	1.19				
,, 2-(12-15%)	16.13	1.43				
,, 3—(15–20%)	17.72	1.63				
,, 4—(20–25%)	15.39	1.21				
,, 5-(25-32%)	18.91	1.92				
,, 6—(32% and up)	19.77	2.08				

### LONDON.

# INFANT MORTALITY.

1891-1900.

Proportion ( in a room	of total population living more than two in in tenements of less than five rooms. (1891 Census.)	Deaths under one year of age. 1891–1900.	Deaths under one year of age per 1,000 living at age 0-1.  1891-1900.
Districts with	under 10% ( 5	13,533	142
,, ,,	10–15%	56,208	180
" "	15–20%	42,158	196
,, ,,	20-25%	36,521	193
,, ,,	25–30%	23,219	210
,, ( ,,	30–35%	22,580	222
27 . 59	Over 35%	16,800	223

The following table relating to persons resident in the artizans' dwellings of the London County Council is interesting as showing the death rates of a working-class population living under favourable circumstances:—

Year 1903.

				Cause	of d	loo+h							Death rates per 1	,000 living in
				Cause	OIC	ieaun,	•						Council's dwellings.	London.
All causes-	-All ages	-	-		-	-	-		-	-	-	*	11.8	15.2
,,	Ages 0-	1 -	-	-	-	-	-	-		-	-		149.7	152.6
,,	,, 0-	5 -	-	-	-	-	-		-	-	-		37.2	49.5
**	,, 5–	20	-		•		-		-	~	-		1.2	2.6
,,	,, 20	and	upw	ards	-	-	-	-		-			9.9	14.9
rincipal e	epi <b>d</b> emic	diseas	es	•	-	-	-				-	-	1.64	1.75
hthisis					-	-	•			-	-	-	1.48	1.55
u <b>b</b> erculou	as disease	sothe	er tl	nan P	hthis	is -		-	-	-	-		0.55	0.60
Bronchitis			-		-	-		-	-	-		-	0.55	1.13
neumonia	, -					-	-	-	-	-			1.25	1.28

The following table shows the death rates at several ages of the London common lodging house population in 1903, those of London at the same ages being stated for the purposes of comparison:—

Death rates per 1,000 males living from certain causes at certain ages in Common Lodging Houses during 1903, and in London during 1901.

Cause of Death.		Age 25.	Age 35.	Age 45.	Age 55.	Age 65.
All causes $    +$	C.L.H.	15·24 6·74	22.62	42·56 21·79	66·30 37·82	144·30 70·42
Phthisis	C.L.H.	6·89 2·65	12·49 4·30	20·27 · 5·01	16·29 4·12	11·49 2·72
Alcoholism (including cirrhosis of liver)	C.L.H.	1·04 0·17	1·27 0·61	1.78	3·79 1·39	5·11 1·36
Urinary Diseases	C.L.H.	1·26 0·22	1.09	3·57 1·28	4·17 2·91	14·05 5·88
Violence	C.L.H.	0·63 0·64	0·72 0·92	1·78 1·43	1·89 1·77	5·11 2·36
Cancer	C.L.H.	0·21 0·14	0·72 0·57	2·23 1·95	7·20 4·36	21·72 7·24
Tubercular diseases other than Phthisis /	C.L.H.	0·21 0·22	0·18 0·16	0·22 0·19	0·76 0·15	1·28 0·27
Circulatory Diseases	C.L.H.	1·46 0·68	2·35 1·34	4·46 3·82	7·58 8·93	24·27 19·04

Death Rates per 1,000 males living from certain causes at certain ages, etc.—continued.

Cause of Death.	Age 25.	Age 35.	Age 45.	Age 55.	Age 65.
Nervous Diseases $\left\{egin{array}{l} C.L.H. \\ London \end{array}\right.$	0.21	0.53	1·78 . 0·91	2·27 1·70	5·11 3·56
Bronchitis $\left\{ egin{array}{ll} C.L.H. \\ London \end{array} \right.$	0·21	1·09	2·01	11·36	30·66
	0·08	0·36	1·18	4·28	11·54
Pneumonia $\left\{ egin{array}{ll} C.L.H. \\ London \end{array} \right.$	1·26	1·81	2·01	6·44	12·77
	0·53	1·20	1·88	2·82	3·81
Other causes $\left\{ egin{array}{ll} C.L.H. \\ London \end{array} \right.$	2·07	0·90	2·45	4·55	12·77
	1·20	2·10	2·97	5·39	12·64

Table showing for London and the population residing in Common Lodging Houses the number of deaths of Miles from certain causes out of 1,000 deaths from all causes at five age periods.

Green of Dooth	Age	25.	Age	35.	Age	45.	Age	55.	$Ag\epsilon$	65.
Cause of Death.	C.L.H.	London.	C.L.H.	London.	C.L.H.	London.	C.L.H.	London.	C.L.H.	London.
All Causes.	1,000.	1,000.	1,000.	1,000.	1,000	1,000.	1,000.	1,000.	1,000.	1,000
Phthisis	*452	393	*552	337	*477	229	*246	109	*80	39
Alcoholism (including	*68	26	*56	48	42	54	*57	37	*35	19
Cirrhosis of Liver). Urinary Diseases	*82	32	48	52	*84	59	63	77	*97	84
Violence	41	95	32	72	42	65	29	47	*35	33
Cancer	14	20	32	45	52	90	109	115	*150	103
Tubercular Diseases other than Phthisis	14	32	8	13	5	9	*11	4	*9	4
Circulatory Diseases -	96	100	104	105	105	176	114	236	168	270
Nervous Diseases		32		42	42	42	34	45	35	51
Bronchitis	*14	11	*48	28	47	54	*171	113	*213	164
Pneumonia	*82	79	80	94	47	86	*97	75	*89	54
Other Causes	137	180	40	164	57	136	69	142	89	179

<sup>\*</sup> Proportions in C.L.H.'s starred are those in excess of the corresponding London proportions.

In insanitary areas the death rates are frequently 35 and 40 in the 1,000 of the population.

A noteworthy exception is to be found in Jewish populations who when living in houses of the sort usually demolished under the Housing of the Working Classes Act nevertheless have death rates which, compared with those of the district or of London, are in no way high. This is, I believe, due to the better care these people take of their health, especially of their children, and to their temperance.

It would appear from the tables that there has been an improvement in the power of the London population to resist disease and death, and in all probability a considerable cause of this improvement is the better feeding of the population.

It is deserving of notice, however, that infant mortality has not shown corresponding reduction.

The following table shows the annual number of deaths of infants under one year of age in 1,000 births in London in successive periods.

Period.	Annual Mortality of Infants.
184150	157
1851—60	155
186170	162
1871—80	158
1881—90	152
1891—1900	160

The improved food supply of the population as a whole has, perhaps, not been shared by infants, and it is significant that their mortality rate has remained practically stationary.

#### APPENDIX XIV.

Appendix to Evidence of Dr. Shadwell.

### TABLES SHOWING THE URBANIZATION OF GERMANY.

I.

						Percentage of	f Population.	
					1871.	1880.	1890.	1895.
Towns	containi	ng more than 100,000 inhabitants	-	-	4.8	7.2	11.4	13.5
,,	,,	from 20,000 to 100,000 inhabitants	-	-	7.7	8.9	9.3	10.5
,,	,,	" 5,000 to 20,000 inhabitants	•	-	11.2	12.6	11.5	13.6
,,	, ,,	under 2,000 inhabitants		-	63.9	58•6	5 <b>7·</b> 5	50.2

(Schmoller's Jahrbuch, 1901.)

II.

						 			Percentage of	f Population.
									1895.	1900.
Rural Com	munitie	es (under 2,000 inhabitants) -	-	-	-	-		-	50.2	45.6
Urban	<b>99</b> -	(over 2,000 inhabitants) -	-				-	•	49.8	54•4

(Statistisches Jahrbuch für das Deutsche Reich, 1903.)

III.

					1882.	1895.
Population engaged in agriculture, forestry, and fishing -	-	-	-	-	18,840,818	18,501,307
Population engaged in mining, manufacturing, and building		-			16,058,080	20,253,241

IV.

TABLE OF RECRUITING RETURNS IN GERMANY, 1901.

						Percentag	ge of Recruits F	Examined.	
Predomin <b>a</b> nt Dist	l <b>y A</b> g cricts	gricul •	tural		Fit.	Prospectively Fit.	Less Fit.	Unfit.	Unworthy.
East Prussia -	-	-	-	- İ	68.6	11:3	13.3	6.6	0.2
Elsass	-	-		-	67•6	14.1	11.7	6.5	0.1
Wes <b>t Pr</b> ussia -	-	-	-	-	65.1	13.7	14.0	6.9	0.3
Pomerania -	-		-	-	60.1	19.3	13.5	6.8	0.3
Posen	-	-	-	-	59.9	15.9	15.6	8:4	0.2
Predominan Dis	tl <b>y I</b> tricts	ndust	rial						
Rhineland 🏌 -		-		-	52.8	20.3	17:4	9•4	0.1
Sa <b>x</b> on <b>y -</b> -		•	-		54·9 and 50·7	13·5 and 13·6	24·5 and 28·4	6.8 and 7.0	0·3· and 0·3
Hannover		-	-	-	53.7	17.6	18.2	10.3	0.2
Sile <b>sia -</b> -	-	-	-	-	49.2	15.6	24.7	10.1	0.4
Brandenburg -		-	-	-	47.6	11:4	3 <b>3·7</b>	7.0	0.3
German Empire	-	-	-	-	55.2	16.7	19.7	8.1	0.3

# COMPARATIVE TABLE OF RECRUITING RETURNS FOR THE GERMAN EMPIRE IN YEARS 1894 AND 1901.

		Z	Zear.				Fit.	Prospectively Fit.	Less Fit.	Unfit.	Unworthy.
1894	-	-		-	-	-	56•2	16.7	20.0	6.8	0.3
<b>19</b> 01	-	-	-	-		-	<b>55·</b> 2	16.7	19.7	8.1	0.3

The "Fit" have fallen 1 per cent., and the "Unfit" have risen 1.3 per cent.

### TABLES SHOWING THE RATES OF REPRODUCTION IN TEXTILE AND IN METAL TOWNS.

# BIRTHS PER 1,000 OF POPULATION, 1901

### V.—ENGLAND.

		Te	xtile	Town	ıs.					Met	tal <b>T</b>	owns.				
Bolton -	-							27.4	Gateshead -		-		-		-	36 <b>·7</b>
Blackburn -	-		-		-	-		26.5	Bilston -		-	-	-	-	-	36.5
Oldham -	-	-	~		-		-	24.5	Sunderland -		-	-	-	-		35.3
Burnle <b>y</b> -	-	-		-	-		-	23.7	Sheffield -		-		-		-	33.0
Bradford -	-	-	-	-				23.0	Newcastle -		-	-	-	-	-	32·1
Huddersfield		-		-		-	-	22.9	Birmingham -	-	-	-	-	-	-	31.9
Halifax -		-	-	-	-	-	-	22.3	Wolverhampton -	-	-	-	-	-	-	31.9
Mean -		-				-		24.7	Mean	_	-	-	_			33-9

### VI.—GERMANY.

Plauen	-	-	-	-	-	-	-	-	39.6	Oberhausen	-	-	-	-	-	-	-	50.1
Chemnitz	-	-	-	-	-	-	-		39.5	Gelsenkirchen	-	-	-	-	-	-	-	49.0
M. Gladba	ch	-	-			-	-		39.4	Hörde -	•	-	-	-	-	-	-	47.0
Zwickau	-	-		-	-	-	-	-	34.4	Essen -	-	-	-	-	-	-	-	46.1
Elberfeld	-	- '			-	-		-	34.0	Duisburg -	-	-	-	-	-	-	-	46.0
Barmen	-	-		-	-	-	-	-	33.2	Dortmund -	-	-	-	-	-	-	-	42.9
Krefeld	-	-	-	-	-	-	-	-	28.8	Bochum -	-	-	-	-	-	-	-	42.4
Mean	-	-	-	-	-	-	-		35.5	Mean -	-	-	-	-	-	-	-	46.2

# APPENDIX XV.

Appendix to Evidence of Miss Anderson.

TABLE I.

SHEWING WOMEN AND GIRLS WHOSE WORK IS REGULATED BY THE FACTORY ACT.

	Census 1901.	England and Wales.	Scotland.	Ireland.	United Kingdom.
	(a) Female population over 10 years (b) Ditto in all occupations	13,189,585 4,171,751	1,790,242 591,624	1,818,403 549,874	16,798,2 <b>30</b> 5,313,249
Employed in Textile Factories, 1899:	Women	359,031	75,694	37,862	472,587
	Young Persons -	121,316	21,687	8,601	151,604
	Children	19,590	2,538	2,668	24,796
	Total	499,937	99,919	49,131	648,987
Employed in Non-Textile Factories,	Women	292,416	48,206	28,012	368.634
1899:	Young Persons -	125,272	21,338	6,797	153,407
	Children	1,435	271	49	1,755
	Total	419,123	69,815	34,858	523,796
Employed in Workshops, 1897:	Women	198,858	38,707	12,815	250,380
	Young Persons -	87,531	11,646	5,144	104,321
	Children	911	359	127	1,397
	Total	287,300	50,712	18,086	356,098
Employed in Factories and Workshops:	TOTAL	1,206,360	220,446	102,075	1,528,881
Percentages:	(a) Of Total over ten years - (b) Ditto, all occupations	9·146 28·917	12·313 37·264	5·613 16·744	9·101 28·774

TABLE II. SHEWING NUMBER, AGE, AND SEX OF WORKERS EMPLOYED IN LAUNDRIES IN 1901.

(a). Under the Factory Act. (b). In all laundry work. Census 1901.

			nd and Vales.	Scot	tland.	Irel	and.		nited ngdom.	
		M.	F.	M.	F.	М.	F.	М.	F.	Total number of Laundries.
	Adults	5,135	38,098	387	3,312	209	1,629	5,731	43,039	
Employed in Steam or FACTORY	Young Persons	842	8,300	111	1,077	47	343	1,000	9,720	2,102
Laundries.	Children	13	39	2	3			15	42	
	Total	5,990	46,437	500	4,392	256	1,972	6,746	52,801	
	Adults	1,365	25,536	41	1,708	7	285	1,413	27,529	
Employed in Hand or Workshop	Young Persons	229	1,684	6	553	6	9	241	2,246	5,011
Laundries.	Children	29	21	5	35			34	56	*
	Total	1,623	73,678	52	2,296	13	294	1,688	29,831	
	Adults	6,500	63,634	428	5,020	216	1,934	7,144	70,588	
a. Totals in Steam and Hand	Young Persons	1,071	9,984	117	1,630	53	352	1,241	11,966	7,113
Laundries under regulations.	Children	42	60	7	38		_	49	98	
	Total	7,613	73,678	552	6,688	269	2,286	8,434	82,652	
b. Census, 1901. All laundry work.	Employers as well as employed.	*8,874	196,141	*511	17,630	*253	12,919	9,638	226,690	

These figures do not include Engineers, whereas in the Returns to the Factory Department all employers and employees are included.

TABLE III.

SHOWING WOMEN AND GIRLS EMPLOYED IN THE LARGEST WOMEN'S INDUSTRIES UNDER THE FACTORY ACT.

50	Boys.	391,528	191,976	8,434	96,141	103,880	44,547	9,217	95,716	14,893
Total.	Girls in Factories and Workshops.	658,933 (43.099%	409,556 (26.787% of total female	82,652 (5.406%)	71,121 (4.651%)	32,685 $(2.137%)$	29,329	23,927	23,236	22,555
Women and Girls.	Total.	9,946	259,804	29,831	21,942	None,	None.	None,	10,193	None.
	Adults.	7,139	<b>9</b>	27,529	18,890	None.	None.	None.	7,615	None.
Employed in Workshops.	Young Persons.		79,843	2,246	3,004	None.	None.	None.	2,570	None.
Employed	Children.	68	1,161	26	48	None.	None.	None.	∞	None,
nd Girls.	Total.	648,987	149,752	52,821	49,179	32,685	29,329	23,927	13,043	22,555
ories. Women and Girls. (1899.)	Adults.	472,587	109,964	43,059	34,132	24,534	20,835	13,745	9,253	14,653
Fact	Young Persons.	151,604	39,159	9,720	14,841	7,869	8,375	10,117	3,786	7,892
Employed in	(Children.	24,796	629	42	206	282	119	65	4	10
	/	1.—Textile trades, 1899 and 1897	2.—Clothing trades, 1899 and 1897 (Tailoring, dress, millinery and corset making, shirt, linen collar, blouse, boot and shoe making, etc.)	3.—Laundries, 1901	4.—Food preserving, 1899 and 1897 (Bread, confectionery, cocoa, chocolate, fruit and fish preserving, etc.)	5.—Print, Bleach and Dye Works, 1899 (Mainly warehouse calendering and finishing processes)	6.—Earthenware and China, 1899	7Tobacco, Snuff, and Cigars, 1899 -	8.—Furniture, 1899 and 1897	9.—Bookbinding, 1899

10.—Letterpress and Lithographic Printing, 1899 and 1897	58	7,803	11,301	19,132		103	204	307	19,439	117,984
11.—Miscellancous Metal Articles, 1899 and 1897	∞	3,336	8,353	11,697	9	728	1,315	2,049	13,746	25,653
12.—Paper Making, 1899	26	2,283	9,197	11,506	None.	None.	None.	None.	11,506	22,340
13.—Chains, Nails, Screws, Locks, and allied trades, 1897	က	2,658	6,299	8,960	-1	585	1,658	2,250	11,210	26,569
14.—Fancy Box Making, 1890 and 1897	19	3,151	4,630	7,800	ಣ	688	1,746	2,638	10,438	4,035
15.—Paper Box Making, 1899 and 1897	12	3,019	3,697	6,728	14	991	2,055	3,060	9,788	1,942
16.—Envelopes and other Stationery, 1899 and 1897	63	2,856	5,308	8,166	1	275	448	723	8,889	3,036
17India-Rubber and Gutta-Percha, 1899 and 1897	63	2,061	5,699	7,762	- Company	175	528	703	8,465	11,790
18.—Explosives, 1899 and 1897		984	3,489	4,473	41	91	170	265	4,738	7,880
19.—Aerated Water Making, 1899 and 1897	П	395	4,101	4,494	1	16	34	50	4,544	17,831
20.—Brush Making, 1899 and 1897	p-m-	917	1,960	2,878	1	383	1,032	1,415	4,293	7,340
21.—Unbrella Making, 1899 and 1897	4	518	1,959	2,481	H	290	1,362	1,653	4,134	2,015
22.—Fustian Cutting, 1899	15	898	2,485	3,398	None.	None.	None.	None.	3,398	1,368
23Artificial Flower Making, 1899 and 1897 -	1	54	396	450	∞	806	2,019	2,935	3,385	385
24Soap and Candle Making, 1899 and 1897 -	ಣ	1,074	1,972	3,049	n , madaga	37	199	236	3,285	11,240
25*Lucifer Match Making, 1899	eseese	1,065	2,003	3,068	None.	None.	None.	None.	3,068	11,240
26.—Rag Sorting, 1899 and 1897 (Not including Textile trade 3056)	1	109	750	829	¢1	215	1,982	2,199	3,048	710
		- 1				- Company Comment on Company Comment				

HOURS OF EMPLOYMENT OF WOMEN AND GIRLS UNDER THE FACTORY ACT. 190

	Period of Employment.	oloyment.	Meal Times	nes.	Overtime for Press of Work and Perishable	Sunday and	Annual
	Monday to Friday.	Saturday.	Monday to Friday.	Saturday.	Articles (Women over 18 years).	All-Night Work.	Holidays.
Textile Factories:  Women	6 a.m. to 6 p.m. or 7 a.m. to 7 p.m.	6 a.m. to 12.30 p.m. (if one hour for meal) or 6 a.m. to 12 p.m. (if ½ hour for meal), 7 a.m. to 1 p.m. (if ½ hour for meal).	Two hours at least, of which one at least to be before 3 p.m.	Half-an-hour at least.	Prohibited in Textile Factories except for warehouse processes (same as for press of work in Non-Textile Factories), or to recover time lost by drought or flood in water mills.	Prohibited.	Christmas Day, Good Friday, and four Bank Holi- days, or other days substituted by notice.
Young Persons (under 18 years)	Same as women.	Same as women.	Same as women.	Same.			
Children (under 14, or 13 if with educational certificate, and over 12 years)	(Bither on alternate days as above, or in morning and afternoon sets:	Same as young persons, but not on two suc-	Same.	Same.			
	7 a.m. to 1 p.m. 2 p.m. to 6 p.m. and 7 p.m.	days	In all cases work not to continue over 4½ hours without a break of at least half-an-hour.	to continue over oreak of at least our.			
Non-Textile Factories and Workshops:  Women	(6 a.m. to 6 p.m. 7 a.m. to 7 p.m. 8 a.m. to 8 p.m. (In a few industries 99.)	6 a.m. to 2 p.m. 7 a.m. to 3 p.m. 8 a.m. to 4 p.m.	One and a half hours at least, of which one before 3 p.m.		1. For press of work in many processes, specified by Order of Sceretary of State:—Two hours on three days a week and thirty days a year with	Prohibited (outside overtime permitted).	Same as Textiles,
Young Persons	Same as women.	Same as women.	Same.		extra half hour for meal.  2. For perishable articles specified by Order		
Children	Either on alternate days as above, or in morning and afternoon sets:  6, 7, or 8 a.m. to	(Same as young persons, but not on two successive Satur-	Same,		of Sceretary of State:—Two hours on three days a week, and fifty days a year with extra half-hour for meal.		
	2 p.m. to 6, 7, or 8 p.m.	(days.	In all cases work not to continue over 5 hours without a break of at least half-an-hour.	to continue over preak of at least our.	In Creameries, exceptional hours and Sunday and holiday cmployment permitted, with restrictions, by Order of Secretary of State. (See also below Special Exemptions from the Law.)	eries, exceptional hours and Sunday and holiday or permitted, with restrictions, by Order of Secretary (See also below Special Exemptions from the Law.)	y and holiday cm-der of Secretary of from the Law.)

oc- Same as Textiles, etc.			or Not provided for.		ed Same as Factories and Workshops.	· 20	the Factory Act or	Squarton for hours of employment:— Preserving and Curing of Fish on arrival of fishing boats (women and voung persons throughout the year)	Preparing and Cleaning of Fruit on arrival at a factory or workshop; women and young persons in June,	, ,	Flax Scutch Mills where women only employed and work intermittent, not more than six months in the year.
Prohibited be- tween 10 p.m. and 6 a.m.		rkshops.	Prohibited (for young persons and ohildren).		Both permitted for women,	young persons, and children.	normally under	of employment: ng of Fish on ar	ning of Fruit on	September.	where women ; not more tha
No overtime.		Women's hours, meal times, holidays, etc., entirely unregulated in Domestic Workshops.	No overtime beyond the Prohibited (for ordinary period limits. young persons and ohildren).		-	without extra meal time.	N.B.—Certain processes normally under the Factory Act or	from regulation for hours of employment:—  Preserving and Curing of Fish on arrival of fishing b  (women and voung persons throughout the year)	Preparing and Clear or workshop; we	July, August and September.	Flax Scutch Mills work intermittent year.
s. Half-an-hour.	Five hours' spell may be exceeded.	lays, etc., entirely u	2½ hours (unspecified).	Work not to continue over 5 hours without a break of at least half-anhour for a meal.	limes.	Work not to continue more than iive hours continuously without half-an-hour for a pause.	4	sion for meals.			
One and a half hours. Half-an-hour.	Five hours' spell	ırs, meal times, holic	{ 4½ hours (unspecified).	Work not to con without a break hour f	Meal Times.	Work not to continue more hours continuously withou hour for a pause.		No other provision for meals.			
Aspecified period of 8 hours taken			(6 a.m. to 4 p.m. (8½ hours exclusive of meal times.) (6 a.m. to 1 p.m. or 1 p.m. to 4 p.m. not two successive Saturday afternoons.		neal times).			cal times).			
	tween 6 a.m. and 10 p.m.		Outside limits:— 6 a.m. to 9 p.m. (10½ hours exclusive of meal times).	6 a.m. to 1 p.m. or 1 p.m. 1 p.m. to 8 p.m.	Daily Limits: (Exclusive of meal times).	Fourteen hours.	Twelve hours. Ten hours.	Weekly Limits: (Exclusive of meal times).	Sixty hours.	Sixty hours.	Thirty hours.
Women's Workshops (where no young persons or children are employed).			Domestic Workshops (where only family living there are at work):  Young Persons	Children	Laundries (in which over two persons besides the family are employed):	Women	Young Persons Children		Women - · · · · ·	Young Persons	Children

#### APPENDIX XVI.

Appendix to Evidence of Mr. W. McAdam Eccles and Dr. Robert Jones.

#### STATEMENTS UPON WHICH THE EVIDENCE ON THE RELATION OF ALCOHOL TO PHYSICAL DETERIORATION WAS BASED.

NAMES OF THE MEDICAL MEN INTERESTED IN THE SUBJECT WHO MET IN CONFERENCE.

Sir Thomas Barlow, Bart., K.C.V.O., M.D., F.R.C.P., Physician to University College Hospital.

FLETCHER BEACH, M.B., F.R.C.P., Physician to the West End Hospital for Diseases of the Nervous System.

HARRY CAMPBELL, M.D., F.R.C.P., Physician to the North-West London Hospital.

W. McAdam Eccles, M.S., F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital.

C. F. HARFORD, M.D., M.R.C.S., Physician to the St. James-the-less Medical Mission, Bethnal Green.

Sir VICTOR HORSLEY, F.R.S., B.S., F.R.C.S., Surgeon to University College Hospital.

T. B. Hyslop, M.D., M.R.C.P., Physician and Superintendent at Bethlem Royal Hospital.

ROBERT JONES, M.D., M.R.C.P., F.R.C.S., Physician and Superintendent at the London County Asylum, Claybury.

T. N. KELYNACK, M.D., M.R.C.P., Physician to Mount Vernon Hospital for Consumption.

J. J. Ridge, M.D., M.D. (State Medicine), B.S., Medical Officer of Health for Enfield.

T. CLAYE SHAW, M.D., F.R.C.P., late Physician and Superintendent at the London County Asylum, Banstead.

G. E. SHUTTLEWORTH, M.D., M.R.C.S., late Medical Superintendent, Royal Albert Asylum for Imbeciles.

E. CLAUDE TAYLOR, M.D., M.S., F.R.C.S., Medical Officer, Hampstead Workhouse.

A. J. Whiting, M.D., M.R.C.P., Assistant Physician to the Tottenham Hospital.

There were also present—

JOHN Y. HENDERSON, Chairman of the National Temperance League.

E. STAFFORD HOWARD, C.B., Director of the United Kingdom Temperance and General Provident Institution.

A. F. HARVEY, Secretary of the Central Temperance Legislation Board.

JOHN T. RAE, Secretary of the National Temperance League.

I.—Effect of Alcohol on Growing Children. By SIR THOMAS BARLOW, Bart., K.C.V.O., M.D.,

Physician to University College Hospital; late Physician to the Hospital for Sick Children, Great Ormond Street.

Disease in

to Alcohol.

I have been asked to give my experience on the question Children due of the administration of alcohol to children.

In answering the question whether any appreciable amount of actual disease is caused in children by the prolonged administration of alcohol, it is immensely difficult to give statistics, but it is easy to give illustrations.

Some years ago I saw large numbers of out patients at the Children's Hospital, Great Ormond Street, and I satisfied myself that definite cases of alcoholic disease

existed.

Thus, in a boy, aged about ten years, who was under my observation for several weeks, there was well marked evidence of gin-drinker's liver, with abdominal dropsy. He had for a long time carried to his father, who was a cabman, his daily meal, of which some spirit was one of the constituents. The cabman had given the boy little "nips" of spirit, and he had got to like it.

Again, a boy, aged between four and five years, was brought to me with abdominal dropsy and enlargement of the liver. He had been given a certain daily quantity of beer for several months. The beer was stopped, and suitable remedies were given. The dropsy rapidly subsided, and subsequently the liver slowly lessened in size

and the boy recovered.

The occasional administration of gin to children for flatulence is very common amongst certain classes of the London poor. The production of fibroid changes, or, in other words, the hardening and toughening of certain of the viscera of a child during the period of development, may be very far-reaching in its ultimate

II.—PREVALENCE OF ADULT MALE INTEMPERANCE.

In August, 1887, the report of the Collective Investigation Committee of the British Medical Association on the "Connection of Disease with Habits of Intemperance" gation, 1887, was published

It related to the 4,222 men between twenty-five and sixty-five years of age who had died during the preceding three years.

Only 40 per cent. were reported as habitually temperate. 55 per cent. were more or less intemperate, viz. :-

25.6 per cent. careless drinkers,

12.9 per cent. free drinkers,

16.5 per cent. decidedly intemperate,

the rest were unclassed.

This shows the prevalence at that time of intemperance among adult males. Taking the average duration of life of the habitually temperate as the standard, onesixth of the 4,222 men had shortened their lives on the average ten years, two in every thirteen five years, and the rest on the average from two to three years.

#### Comparative Mortality of Adult Males, Publicans and Abstainers.

The Registrar-General has ascertained that of 61,215 men between twenty-five and sixty-five in the community, 1.000 die in one year

but of 61,215 publicans, 1,642 die in one year but of 61,215 Rechabites (abstainers), 560 die in one

III.—ABSTRACT of a PAPER read before the INSTITUTE OF ACTUARIES, on the 30th November, 1903, on the Com-PARATIVE MORTALITY AMONG ASSURED LIVES OF ABSTAINERS AND NON-ABSTAINERS FROM ALCOHOLIC BEVERAGES.

By R. M. MOORE,

Actuary of the United Kingdom Temperance and General Provident Institution.

The paper is based upon the experience of the United of the United Kingdom Temperance and General Provident Institution Kingdom from its establishment in 1841 to the year 1901: a period Temperance of sixty-one years. There were 125,000 policies issued and General by the institution; about one-half of which were on the Provident lives of abstainers, the remainder being on non-abstainers; Institution.

Cases.

Effects of Alcohol on Tissues of Children.

British Medical Association Investi-

the continued abstinence of the former class being ascertained by an annual declaration. These two classes are known respectively as the "temperance" and the "general" section. The policies were further divided into sexes, and classes of assurance (viz., whole-life, endowment assurance, or otherwise); those policies which were accepted on higher terms than ordinary being also separated: the remaining policies, issued at ordinary rates of premium, being described as "healthy lives."

It is upon the experience of healthy male lives assured under whole-life policies in the temperance and general sections respectively (being the bulk of the institution's business) that the conclusions arrived at are mainly based; though these conclusions are completely supported by the experience of other classes of policy, and of female lives.

Conclusions

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After describing the various actuarial processes by which the results are arrived at, the writer shows that the experience of the general section, from age thirty-four upwards, was practically identical with the most recent experience of the life offices generally, known as the Om Table, published under the authority of the Institute of

That the experience of the general section of the office is sufficient in quantity is indicated by the fact that it consists of 467,000 "years of life"; in other words it is the equivalent of 467,000 persons of various ages from ten to ninety-nine being under observation for a year: technically called "exposed to risk." As an indication how closely the experiences agreed, it may be mentioned that the actual deaths, 1841—1901, in the general section of the institution were 8,947. Had the mortality been at the Om rate (the average rate of the life offices generally) the number of deaths would have been 8,911: a difference of less than one-half per cent.; thus showing that the lives assured in the general section of the office were good average lives.

In the temperance or abstainers' section there were 398,000 years of life under observation, or "exposed to risk." The deaths "expected" among these lives, if uperiority the ordinary average rate of mortality (O<sup>m</sup>) had prevailed o O<sup>m</sup> Table. among them, would have been 6,899. Or, if the mortality of the general section had prevailed, the deaths would have been 6,959. But the actual deaths among the abstainers were only 5,124: being less than 75 per cent. of the "expected" deaths according to the average rate of mortality of assured lives.

The higher vitality of the temperance lives is also Higher shown by the fact that out of 100,000 persons aged thirty, Vitality. according to the average rates of mortality (or the experience of the general section of the institution), some 44,000 would survive to age seventy. But according to the experience of the abstainers, over 55,000 would reach age seventy; or 25 per cent. more.

Again it is shown that the average number of years of Higher life enjoyed after age thirty by ordinary assured lives Average of is thirty-five years. But among abstainers it is thirty- Life after 30 eight and four-fifth years: about 11 per cent. more. At age forty these figures are twenty-seven and one-third years among ordinary assured lives and thirty and onethird years among abstainers; a gain of about the same proportion.

The results throughout are based on the experience of Policies and "policies" and not "lives"; that is to say, every separate "Lives." policy on one life is regarded as a separate risk: but the writer shows that the two methods of dealing with the data produce practically identical results.

It is also shown, by an exhaustive examination, that "Transfers." the results are not affected by transfers from the temperance to the general section and vice versa: such transfers being proportionately very few in number.

In conclusion, the author claims: -Firstly: that the Conclusions. non-abstainers assured in the institution are good average lives, generally equal to the best accepted standard of assured life, namely, the Om table. Secondly: that the abstainers show a marked superiority to the nonabstainers throughout the entire working years of life for every class of policy, and for both sexes, however tested. Thirdly: that this superiority has not been brought about by the operation of the transfers between the two sections. Fourthly: that the financial working of the institution in the allotment of bonuses, as between the abstainers and the non-abstainer sections, has not been influenced by such transfers.

The detailed experience in quinary groups of ages of Statistical healthy male lives assured under whole-life policies, Tables (Nos. non-abstainers and abstainers respectively, is appended:— refer to original paper).

TABLE III.

Healthy Males. Non-Abstainers. Whole-Life Policies. "Transfers to" excluded.

Entrants 1841-1901. Experience 1841-1901.

Ages.	Exposed to Risk.	Died.	Rate of Mortality per cent. per annum unadjusted.	Adjusted O <sup>m</sup> Rate of Mortality per cent. Central Ages of Groups.	Expected Deaths by O <sup>m</sup> .	Taking O <sup>m</sup> as 100, the Non- Abstainers' Experience is	Ages.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
- 9	74	• •	• •	• •		10.0	- 9
10-14	590	1	170	•345	2	49.3	10-14
15-19	2,104	10	•475	·375	8	127	15-19 20-24
20-24	9,516	63	•662	·431	41	154.	20-24
25-29	27,099	157	.579	·523	142	111.	
30-34	46,965	339	•772	·648	304	111.	30-34
35-39	61,106	495	·810	·80 <b>4</b>	491	101.	35-39
• 40-44	67,423	645	957	1.001	675	95.6	40-44
45-49	65,931	846	1.283	1.277	842	100.	45-49
50-54	58,941	992	1.683	1.693	998	99.4	50-54
55-59	47,879	1,136	2.373	2.338	1,119	101.	55-59
60-64	35,161	1,148	3.265	3.344	1,176	97.6	60-64
65-69	23,219	1,176	5.065	4.900	1,138	103.	65-69
70-74	12,857	992	7.171	7.281	936	98.5	70-74
75-79	5,780	614	10.623	10.882	629	97.6	75-79
80-84	1,890	307	16.252	16.240	307	100.	80-84
85-89	358	79	22.607	24.001	86	94.2	85-89
90-94	49	16	32.653	34.788	17	93.9	90-94
95-99	1	1	100.000	48.276	• •	207	95-99
All Ages	466,943	8,947	• • .	• •	8,911	• •	All Ages

TABLE IV.

Healthy Males. Abstainers.

Whole-life Policies. "Transfers to" excluded.

Entrants 1841-1901.

Experience 1841-1901.

Ages.	Exposed to Risk.	Died.	Rate of Mortality per cent. per annum Un- adjusted.	Adjusted Om Rate of Mortality per cent. Central Ages of Groups.	Expected Deaths by O <sup>m</sup>	Taking O <sup>m</sup> as 100, the Abstainers' Experience is	per cent. per annum. Non- Abstainers'	Taking Non- Abstainers' Experience as 100, Abstainers' Experience is	Ages.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		,	1.299						- 9
- 9	77	1	199		4	55.1	.170	112.	10-14
10-14	1,051	$\frac{2}{30}$	668	375	17	177.	.475	141.	15-19
15-19	4,491	73	463	431	68	108	662	69.9	20-24
20-24	15,760		406	.523	171	77.8	.579	70.1	25-29
25-29	32,740	133	408	.648	302	62.9	.722	56.5	30-34
30-34	46,555	190	•444	804	435	55.2	.810	54.8	35-39
35-39	54,097	240	.547	1.001	557	54.6	.957	57.2	40-44
40-44	55,604	304	.749	1.277	656	58.7	1.283	58.5	45-49
45-49	51,377	385	1.049	1.693	747	62.0	1.683	62.4	50-54
50-54	44,138	463	1.673	2.338	818	71.5	2.373	70.6	55-59
55-59	34,974	585	2.565	3.344	845	76.7	3.265	78.5	60-64
60-64	25,263	648	4.260	4.900	808	86.9	5.065	84.0	65-69
65-69	16,479	702	6.199	7.281	679	85.1	7.171	86.5	70-74
70-74	9,325	578	11.607	10.882	474	107.	10.623	110	75-79
75-79	4,351	505	15.230	16.240	219	93.6	16.252	93.7	80-84
80-84	1,346	205	20.497	24.001	77	85.8	22.607	90.7	85-89
85-89	322	6 14	25.455	34.788	19	73.7	32.653	77.9	90-94
90-94	55		25.455	48.276	3	101	100.000		95-99
95-99	5	• •	••	48.270		••	100 000		
All Ages.	398,010	5,124	• •	• •	6,899	• •	• •		All Ages.

IV .- ALCOHOL AS A CAUSE OF MENTAL DEGENERATION, AND ITS ACTION INDIRECTLY UPON OFFSPRING.

Report of ROBERT JONES, M.D., M.R.C.P.,

Chief Medical Officer, London County Asylum, Claybury

There are probably at the present time more than 114,000 certified insane persons in England and Wales England and alone, of whom approximately 52,000 are males and 62,000 females.

If the fifty-seventh Report of the Commissioners in lunacy to the Lord Chancellor, 1903, be consulted, the proportion per cent. of instances in which alcohol has been assigned as the cause of insanity to the yearly average missioners in number of patients admitted into asylums in the five years, 1896–1901 inclusive, is 21 per cent. for males and 9·2 per cent. for females, and probably the proportion for

Scotland is much higher.

During the year 1902, which is the last upon which there are at present published records, there were 22,851 persons (male 11,217, females 11,634) admitted into lunatic asylums in England and Wales, and the Lunacy Commissioners who compile these numbers state that of these alcoholic excess was the assigned cause in 23.1 per cent. males and 9.6 per cent. females—a higher ratio than for the average of the five previous years. I believe that upon the lowest computation, and after making the necessary deduction for the more rapid death in some cases, such as those of general paralysis, a disease which certainly bears an indirect relation to alcohol, that at the present time there remain in asylums no less than about 11,000 males and 6,000 females who are mentally decrepit, mainly through the effects of alcohol.

During the last ten years, 1893-1902 inclusive, 35,916 into London persons (16,356 males and 19,560 females) have been admitted into all the London County Asylums. Of these Asylums. (3,497 males, 2,320 females) have been admitted whose insanity was assigned to drink as a cause, a proportion of 21 per cent. among the men and 11 per cent. among the women.

During the time that the London County Council's Asylum at Claybury has been opened, now over ten years (1893-1904), a period of which I have direct experience as medical officer, 9,544 patients (males 4,251, females 5,393, including private patients) have been admitted

thereto, of whom 965 males, 699 females, a proportion of 22.7 per cent. of the males and 13.1 per cent. of the females, definitely ascertained to owe their insanity to

A total, therefore, of 1,664 persons of both sexes have Insanity du been thus rendered incapable of productive work through to Alcohol their own act, and have been or are being compulsorily and of necessity detained, supported and clothed, at the ratepayers' expense. During last year, 1903, in Claybury asylum, out of a total of 607 persons among the poorer classes (296 males, 311 females) admitted, no less than 113 males and 69 females, a proportion of 37 per cent. of men and 22 per cent. of women, were brought into the asylum insane, their condition being in some way directly or in-directly connected with alcoholic excess, indirectly contributing through loss of inhibition or self-restraint to the contagion of syphilis and to incurable general paralysisa disease which is higher in proportion among those who drink than among the general population.

This fact certainly lends favour to the view that drink Syphilis an favours general paralysis—a disease which is without General hope of relief, but which, on the other hand, is entirely Paralysis in preventible, and a form of insanity to which, above all Soldiers and others, our service men-soldiers and sailors-are most Sailors. prone. Of these 182 drink cases admitted into this asylum about one-third have been discharged during the year, in many cases probably again to relapse, but 47 of the males remained in the asylum during a total aggregate of 640 weeks and 17 of the women 260 weeks. The cost of their maintenance, apart from their certification, previous infirmary residence and conveyance hither, falling upon the already over-burdened ratepayers.

Of the other 119 cases many, perhaps most of them, Effect of are probably doomed for the rest of their lives. Nor is Alcoholic this all, for out of these 70 per cent. men and 80 per cent. Insanity women were married, had families dependent upon them, upon and the cruelty of neglect induces a feebleness in their Dependents descendants which it is impossible correctly to estimate. Of the cases brought into this asylum, no less than 30 per cent. of the men and 56 per cent. of the women (where this could be ascertained) were country born, showing that their town environment, to say the least, was not favourable to their self-restraint. They were also brought at their best age, men between thirty-five and forty, and

Asylums.

Number of

Insane in

Report of

the Com-

Lunacy.

Wales.

Claybury Asylum.

Other Factors besides

Alcoholic Insanity in Women.

Factory Workers.

Loss to Community

through

Alcohol.

Effects of

Alcohol on

Offspring.

Alcoholic

Lunatics

especially

to other diseases.

susceptible

women twenty-five and thirty-five, although many chronic cases of long-continued drink are admitted after the climacteric period.

I am certain that other factors, such as competition, insecurity of trade, insanitary surroundings, poverty—in some cases starvation and want—improper food in kind and quality, may have induced their alcoholism.

Of this, there is in my mind no possible doubt. The proportion of women whose insanity is ascertained to be due to drink is higher in Claybury than in the other asylums of London—possibly owing to the fact that it is the territorial asylum for the East-end of London, where so many women are employed in factory work.

This view is supported by the fact that in the City of Nottingham, where so many women are employed in lace factories, twice as many women as men are received into the asylum whose insanity is ascribed to drink. In Sunderland, on the other hand, where the prosperity of the mechanic and the miner is evidenced by higher wages and abundant work—and here also the question of climate as well as occupation may have to be considered, for the Northerner drinks habitually more than the Southerner—the proportion reaches 38.6 per cent. as compared to 21 per cent. among the women, the combined average being the exceptionally high one of 38 per cent. In Scotland this proportion is even higher. The statistics from this year's report of the Gartloch Asylum for the City of Glasgow gives the high percentage of 45 per cent. for males, 26.8 per cent. for females.

In marked contrast with this is the case of Cornwall, which for men and women gives the combined average of under 2 per cent., and of rural Kent, which gives a combined average of 3.8 per cent. For the whole county of London the total average for the same period was 19 per cent. for males, 10 per cent. for females, and it is a sad reflection that every year over 600 persons (over 400 men and 200 women) become inmates of pauper asylums in London from this cause alone. The misery and cruelty resulting to the family, and the absolute degradation of the home as the result of intemperance, are too well known to need description or reference.

Alcohol perverts the moral nature, affects the judgment and impairs the memory, it moreover especially affects the motor system, and creates an enormous loss to the community through destroying the productiveness of the skilled craftsman; no less than 30 per cent. of the admissions at Claybury during 1903 were of this class, who, as breadwinners, not only lose their trade, but have, moreover, to be detained, with others to look after them, in an asylum, leaving their dependents to swell the list of the "legal poor" or the criminal class.

In regard to the effects of alcohol upon the descendants, anything which devitalizes the parent unfavourably affects the offspring, and clinical experience supports this in the lowered height, weight, and impaired general physique of the issue of intemperate parents. It also records the fact that no less than 42 per cent. of all periodic inebriates relate a history of either drink, insanity or epilepsy in their ancestors.

It is also my experience that cases of alcoholic insanity are more prone to phthisis than other varieties—possibly owing to their susceptibility to the inimical effects of cold and exposure. They also suffer—more especially women—from the various forms of peripheral paralysis and from renal disease, which, with other deleterious effects of alcohol, induce arterio-selerosis and premature senility. I can point out, not one, but many cases in my own experience of men at fifty-five years of age who are "played out" through what their friends describe as "moderate drinking," but it has been a constant indulgence, due to loss of self-restraint.

The fact pointed out by the Lunacy Commissioners that the proportion per cent. of alcoholic admissions to total admissions into asylums bears a ratio in the private class of 18.5 per cent. for males and 8.8 per cent. for females, showing a loss of self-restraint and a moral weakness which prefers immediate gratification to ultimate good among the poorer classes, proves the need there is for cultivating a greater inhibition, and the need also for encouraging a healthy public opinion in this class which will tend to make the drunkard a reproach even among his own people, instead of, as is too often the case, an object of pity. There is probably less drinking, in proportion, among the well-to-do classes than among the poor, and the effect of social ostracism is more felt among them. It is among

the poor that the increase of alcoholic insanity occurs, and the Lunacy Commissioners state this as a sad fact throughout the Kingdom.

It must not be surmised from the above that I am a strict and stern advocate of total abstinence; I think it involves too many limitations upon the demands of reasonable men and women, and I also think it is a counsel of perfection; but I believe it, nevertheless, to be the best working hypothesis for the cure of and the prevention of drunkenness. Could not this Committee advocate some such measure as the compulsory sale of food with drink. If "licensed victuallers," where does the victual come in?

## V.—THE RELATIONSHIP OF ALCOHOL TO TUBERCULOSIS AND SYPHILIS.

By Dr. A. E. T. Longhurst. Late Surgeon-Major in the Army.

Both clinical research and practical observation prove that the use, and especially the abuse, of alcohol, predisposes disposes to, and aggravates both tuberculosis and syphilis in the human system.

Alcohol predisposes to Tubercle and Syphilis.

disposes to, and aggravates both tuberculosis and syphilis in the human system.

At the British Congress on Tuberculosis, held in London Tubercuin 1901, Professor Koch and others expressed very strongly losis. the opinion that the intemperate were much more liable to fall victims to tuberculosis infection, and that the

able and rapid course.

With regard to syphilis, there is abundant evidence Syphilis. that intemperance seriously predisposes to the contraction of the disease, deadens sensibility, making the persons indifferent as to the consequences of infection, and regardless of cleanliness, and other precautions calculated to protect them from reception of the virus. And no one who has had any experience of the disease and its treatment, in either soldier or civilian, can fail to realise its injurious action, and how seriously it militates against successful treatment.

disease once established in such persons takes an unfavour-

#### VI.—RECHABITE STATISTICS.

#### ALCOHOL AND LIABILITY TO DISEASE.

The Rechabite Directory for 1903–1904 contains the Annual Report for 1902 by the High Secretary, Mr. Richardson Campbell, from which we make the following extract:—

#### M.U. New Experience.

The new investigation into the sickness and mortality experience of the Manchester Unity of Oddfellows, by Mr. Alfred W. Watson, F.I.A., has now been published, and the sickness experience per annum in weeks, as compared with ours, is as follows:—

	M.U.	I.O.R.	M.U.	I.O.R.
Λαο	Weeks.	Weeks.	Advantage. Weeks.	Advantage. Weeks.
Age.				WOOKS.
18	0.952	1.095	0.143	Miller
19	0.924	1.077	0.123	
20	0.901	1.080	0.159	
25	0.928	0.986	0.058	
30	1.007	1.029	0.022	
35	1.168	1.146		0.022
40	1.449	1.391		0.058
45	1.794	1.634	_	0.110
50	2.334	1.933		0.451
55	3.438	2.075		1.363
60	5.198	3.257		1.941
65	8.731	5.035	-	3.696
70	14.617	9.891		4.726
75	22.428	15.054	_	7.374
80	30.320	21.497		8.825
85	35.411	26.000	_	9.411
90	38.247	26.000		12.247
95	39.022	26.000		13.022
100	39.022	26.000		13.022

Members admitted to Rechabites at fifteen years old.

Members admitted to Oddfellows at eighteen years old.

... a much larger proportion of young members.

Remedies

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From the Report of the Public Actuary of South Australia, Mr. H. Dillon Gouge, F.S.S., in accordance with the South Australia Friendly Societies Amendment Act, 1892:—

"In S. Australia there are three Societies which may be regarded as being conducted on strictly teetotal principles—the Albert District of Rechabites, the South Australian District of Rechabites, and the Sons of Temperance; and I have selected the three largest of the mixed societies for the purposes of comparison":

Average Rates. Mortality per cent. Sickress-Weeks. Society. Rechabites (S.A.) 0.620 1.267 Rechabites (Albert) 0.687 1.140 1.291 Sons of Temperance 0.724Abstainers' Average -0.689 1.2481.133 1.828 Foresters Oddfellows (M.U.)  $2 \cdot 208$ 1:351 2.915 G.U. Oddfellows -1.658Non-abstainers' Average 1.381 2.317

From the foregoing figures it will be observed that in the first column (mortality) the non-abstainers' average is more than double, and in the second (sickness) nearly double, that of abstainers.

From another standpoint, also, the figures of the actuary tell a similar tale, *i.e.*, the mortality per cent. of the members actually sick, and the average weeks of sickness of such. These are as follows:—

	Mortal	ity per cent.	Average Week
Society.	of th	e Members	of Sickness per
v	act	ually sick.	Member Sick.
Rechabites (S.A.)	-	3·š33	6.81
Rechabites (Albert)		3.616	5.99
Sons of Temperance		3.638	6.49
*			
Abstainers' Aver	age -	3.557	6.45
	Ü	-	
Foresters	-	5.840	$9 \cdot 43$
Oddfellows (M.U.)		$6 \cdot 789$	11.06
G.U. Oddfellows -	-	6.966	12.24
			Annabas and Marries
Non-abstainers' a	verage	6.532	10.91

These figures show the mortality per cent. of members actually sick among non-abstainers is nearly double that of abstainers, and the fact that the non-abstainers experience ten weeks' sickness for the six weeks of the abstainers, is a strong argument in favour of abstinence.

Many of the Foresters and Oddfellows are abstainers. If they were removed the difference would be greater still.

VII.—THE QUESTION OF PHYSICAL DETERIORATION PRODUCED BY ALCOHOL, WITH SPECIAL REFFRENCE TO THE LOWER ORDERS.

By T. CLAYE SHAW, M.D., F.R.C.P.,

Late Chief Medical Officer London County Asylum, Banstead, etc.

Alcohol is indirectly responsible for many lesions from accidents, and for placing people in false conditions, where they contract disease and commit themselves socially.

By the indulgence of parents in it, children are deprived of necessary food, clothing and warmth, thus becoming starved, stunted, and more liable to be killed by intercurrent disease.

At the Banstead Asylum, 30 to 40 per cent. of the admissions were due, directly and indirectly, to excessive alcoholism.

Direct Influence of alcoholism in of Alcoholism in the parents on the progeny there is little doubt in the Parents on Comparing.

Office influence of alcoholism in the parents on the progeny there is little doubt in the experience of alienists.

experience of alienists.

We must be careful to eliminate, in the case of the father, the time when he became an excessive alcoholic. One often sees the later members of a family of worse development than the earlier ones, because the father began his excessive indulgence after the earlier children were begotten.

Remembering the undoubted facts of the frequent Hereditary similarity in features, gait, mental peculiarities, of children Transto one or other of their parents, there is every reason to mission. believe in the hereditary transmission of qualities quite independent of the influence of environment. I can quote one family where the impulsive and periodic craving for alcohol has been a notable feature for the last three generations.

The influence of the mother is probably greater than the Alcoholism father. It has been shown that pregnant women who are in the decided alcoholics miscarry to a much greater extent than Mother. others, and that when deprived of alcohol at an early stage of pregnancy (as when sent early to prison, and subsequently delivered there) they may go through the full period of gestation.

Again, the influence of the alcoholised blood of the mother on the microkinesis and the micropsychosis of the fœtus must be very pernicious.

One can recall cases of early convulsions in children, of Developdevelopmental insanity, of imbecility, and of epilepsy mental which can only be accounted for by the known inebriety Insanity. of the parents. Alcoholic amenorrhæa and dysmenorrhæa point to the effect of the poison on the genital system of the mother.

Finally, if alcohol in excess sets up a condition in which Deteriorapeople commit acts which, when free from the influence, tion caused they recognise as injudicious and the result of a lowered by condition of responsibility, then it (alcohol) does by the Alcoholism. very setting up of this condition cause deterioration.

Experiments are not wanting—they are in daily evidence. We have inebriate mothers and either abortions or degenerate children. The teleological relationship of the two seems to be as certain as any other conditions of cause and effect.

The effect of food in the breeding of animals is acknowledged; why should not it be recognised in humans? Evidence from Animal same environments, you will never be able to eradicate Breeding. either the nervous or the organic differences.

Breed from sickly parents, the result is either an abortion or a degenerate. If there is nothing in the theory of heredity, if qualities are not transmitted, but everything depends upon environment, then there seems to be no reason why imbeciles should not marry, nor why epileptic and insane people should not be allowed to add to the race on the off-chance of creating a Hercules or a genius.

VIII.—Effect of Maternal Intemperance on Embryos.
The Offspring of Female Chronic Drunkards
in Liverpool Prison.

By W. C. SULLIVAN, M.D.,

Deputy Medical Officer, H.M. Prison, Pentonville.

The death-rate among the infants of inebriate mothers was nearly two and a half times that among the infants of Infants.

Death-rate of Infants.

In the alcoholic family there was a decrease of vitality in successive children: e.g., in one family the earlier tion in born children were healthy, the fourth was of defective offspring. Intelligence, the fifth an epileptic idiot, the sixth stillborn.

Of 219 children of drunken mothers which survived, nine became epileptic—4·1 per cent.

Taking women of the same class he found

Twenty-one drunken mothers with 125 children—sixty-nine died under two years—55.2 per cent.

Twenty-eight sober mothers with 138 children—

thirty-three died under two years—23.9 per cent. (Paper read before the Society for Study of Inebriety, 1900.)

IX.—PARENTAL ALCOHOLISM AS A CAUSE OF MENTAL AND PHYSICAL DEGENERACY IN OFFSPRING.

By G. E. SHUTTLEWORTH, M.D.,

Formerly Medical Superintendent, Royal Albert Asylum for Idiots and Imbeciles, of the Northern Counties, Lancaster; Medical Expert, Rochester House Institution for Improvable Imbeciles, Metropolitan Asylums Foard, etc.

Many loose statements have been made as to the in-Loose temperance of parents being, in a preponderating number Statements. of cases, the sole and sufficient cause of mental degeneracy (idiocy, imbecility, and feeble-mindedness) in the offspring.

Effects of Alcohol.

Indirect Effects on Offspring.

Banstead Asylum Statistics. Direct Influence of Alcoholism in Parents on Offspring. Alcoholism in the

Father.

American Statistics, 1848 and 1856.

British

Statistics,

Earlswood

Asylum

Asylum.

Starting with the Massachusetts Statistics presented by Dr. Howe's Commission (of three) to the State Legislature in 1848, the statement educed therefrom that "out of 300 idiots 145 had drunken parents" has been again and again quoted.

An examination of the original tables, however, shows that this statement is inexact, Dr Howe's own figures being that out of 359 idiots the condition of whose progenitors were ascertained, ninety-nine were the children of drunkards. From a detailed account of forty-five of the cases it would appear that the parents of eleven (one-fourth) were of intemperate habits, and it appears also that in all but one "they were not in a normal state of health," and ten of the cases are noted as scrofulous as well as idiotic.

From a similar inquiry made in 1856 in Connecticut, it would seem that out of 235 cases in which the habits of parents were investigated, there were seventy-six (less than one-third) in which intemperance was noted, and details show concurrent etiological factors in all of those set forth fully.

(It is open to question as to amount of drink taken which connoted "intemperance" in these documents.) Dr. Kerlin, the late able superintendent of the Pennsylvania Institution for Imbeciles, calculated that alcoholic taint was a factor in 38 per cent. of his cases, but he took into account the habits of grandparents as well as parents (i.e., six progenitors in all). So far, as regards oft-quoted statistics of American origin.

In this country Dr. Graham, the Superintendent for fifteen years of the Earlswood Asylum, stated that out of 800 cases tabulated by him, in six cases only is intemperance of parents assigned as the probable cause, and in two

of these there was also insane heredity.

Royal Albert Dr. Shuttleworth, after seven years' experience at the Royal Albert Asylum, with 418 cases of idiocy and imbecility, made a scrutiny in 1877 of the history of 200 male and 100 female congenital idiots, in which full infor-

mation had been obtained, with the following results:—
(Videlicet Paper in British Medical Journal, 1877, and

American Transactions, 1877.)

Of the 200 males, nine had intemperate parents, classed thus: seven, intemperate fathers; one, intemperate mother; and one, both parents intemperate.

Of the 100 females, seven had intemperate parents. In two of these cases the mothers were intemperate, and in five the fathers were intemperate.

Of the 300 patients, sixteen had intemperate parents, eight of whom are described as habitual, and eight as occasional drunkards.

Applying to the examinations of these cases a method akin to that suggested by Dr. Bucknill for the estimation of the drink-etiology of insanity, they may be arranged in the following classes:

Males. Females. Total A.—Parental intemperance the CLASS direct or only ascertained 5 9 cause CLASS B.—Parental intemperance complicated by hereditary tendency to insanity or nervous disease... 2 CLASS C.—Parental intemperance complicated by adverse physical circumstances affecting parents (e.g., illhealth, phthisis, and con-sanguinity) ..... 3 -Parental intemperance complicated by adverse CLASS D.-Parental mental circumstances (e.g., emotion or anxiety of the mother while pregnant, 2 16

It is to be noted that the 300 cases are congenital cases, or cases in which idiocy was observed as an early conse quence of fits during dentition; cases resulting from falls

and other clearly accidental causes being excluded.

After a more mature experience, viz., in 1890, Dr.

Shuttleworth collaborated with Dr. Fletcher Beach in an article published in the late Dr. Hack Tuke's "Dictionary of Psychological Medicine." The former furnished etiological statistics with regard to 1,200 cases fairly well investigated at the Royal Albert Asylum, the latter with

regard to 1,180 cases who had been under care at Darenth. Dr. Shuttleworth's histories gave a percentage of 13:25 of his cases with evidence of alcoholic parentage. Dr. Beach's 19:57 with regard to the Darenth patients, derived, it will be understood, from a lower social stratum than those at the Royal Albert Asylum. If grand-parental as well as parental histories were taken into account, the latter percentage was raised to 21.44.

In both Asylum groups, however, the concurrence of Contribuother factors was recognised, such as neurotic, insane and tory Cauces. phthisical heredity and frights and accidents to mothers, these contributory causes appearing in nearly half of Dr. Shuttleworth's cases. Generally parental intemperance was more marked than that of mothers (but information for case books was usually given by the latter). It is interesting to note that the late Dr. Langdon Down stated in his Lettsomian Lectures (1887) that in 12 per cent. of the fathers and 2 per cent. of the mothers of patients noted by him there was "avowed and notorious intemperance," though he found that the proportion varied extremely with the stratum of society from which the records were

The latest English writer on the causation of Congenital Latest Amentia, Dr. A. F. Tredgold, who has had exceptional Statistics opportunities of investigating the family histories in 150 from Darenth selected cases of idiocy and imbecility under care at the and Earls-London County Asylums, Darenth and Earlswood, states wood. that "alcoholism is present in the antecedents of 46.5 per cent. of the 150 cases, in the greater number in combination with insanity or other neuropathic conditions." (Mott's Archives.)

My own conclusions may be summarised as follows:— Conclusions. (1) That parental intemperance is a large factor in the degeneracy of offspring, both mental and physical.

(2) That intemperance (per se) is not so large a factor as has been sometimes assumed in the causation of congenital mental defect; but that in combination with other heritable taints (e.g., tuberculous, neurotic, insane, and syphilitic) alcoholism is a prevalent though not altogether predominant cause of idiocy, imbecility and feeble-minddness. Parental interpressure is separations a general mindedness. Parental intemperance is sometimes a consequence of a neurotic or irsane heredity, and in such cases the latter must be looked on as the predominating factor.

X .- STATISTICS IN RELATION TO THE EFFECT OF ALCOHOL IN INDUCING PHYSICAL DETERIORATION IN THE OFF-SPRING OF ALCOHOLIC PARENTS.

By FLETCHER BEACH, M.B., F.R.C.P.,

Physician to the West End Hospital for Nervous Diseases; formerly Medical Superintendent of Darenth Schools for Imbecile Children.

On examining this question some years ago with Statistics of reference to the influence of intemperance in the parents Daventh causing idiocy and imbecility in the children, I investigated Asylum. 1,180 cases at Darenth Asylum, and found that intemperance in the parents was assigned as a cause of the idiocy and imbecility in 231 cases, or 19.57 per cent.

In 196 of these cases, however, intemperance was com- Intemperbined with the following causes:-Phthisis, insanity, ance imbecility, syphilis, consanguinity, excitability, chronic-combined neuralgia, abnormal conditions of the mother during with other pregnancy, premature labour, disease of the brain, and causes. paralysis.

Further analysis showed that intemperance was combined with one cause alone in ninety cases, the most frequent associations with it being insanity, phthisis, and worry of the mother during pregnancy. Intemperance was combined with two other causes in fifty-eight. cases, with three in twenty-five, with four in eighteen, with five in four, and with six causes in one case. From these figures it will be seen that in only thirty-five cases was intemperance given as the only cause, or 2.96, certainly not a large percentage.

It was found that intemperance was chiefly marked Intemperin the father, but in twelve cases the mother drank, ance in and in seven cases both father and mother gave way to Father, in drink. In a few cases, intemperance was found to be a Mother, in family failing; thus, in three cases the father's side of both Parents. the family were described as intemperate for several generations. In one case only was the mother's side of the family given to drink, but the result was very marked, for, not only was the patient in the asylum an imbecile, but her two cousins were imbeciles also. In two cases

rticle in Dictionary f Psychogical ledicir e," 890.

70

sporadic cretinism was present in the children, and in one case three children in the family were microcephalic

The higher percentage of intemperance in my cases, 19.57, compared with 13.25 of Dr. Shuttleworth's, is explained by the fact that my cases were all paupers, and in the lower classes intemperance is not looked upon as a disgrace.

XI .- COMPARATIVE STATISTICS OF FRANCE, BELGIUM, NORWAY AND SWEDEN.

By Dr. LEGRAIN,

Superintendent of the Asylum at Ville Evrard, Paris.

Statistics of Dr. Legrain of Paris.

Another proof, if more proof were needed of the inevitable connection of drinking with the increase of vice, crime, and the deterioration of the race and character, is afforded by some remarkable diagrams, recently compiled by Dr. Legrain, of Paris. By his permission these have been re-drawn and translated into English, and are deserving of careful study.

France.

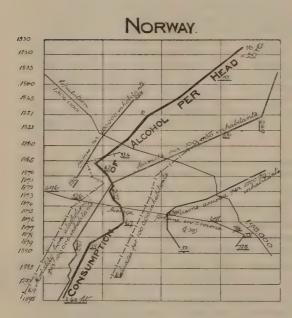
The first deals with France, and shows the increasing consumption of spirits (proof) per head since 1830 in litres. Coincident with this there is an increase of accidental deaths and suicides due to alcoholism, a large increase in lunacy, also of common crimes and recommitals; and, particularly, a definite increase of the percentage of conscripts refused as unfit for service.

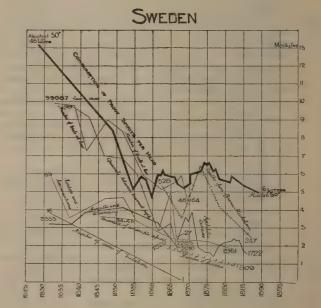
In Belgium again we see a similar upward trend of Belgium. drink and its consequences.

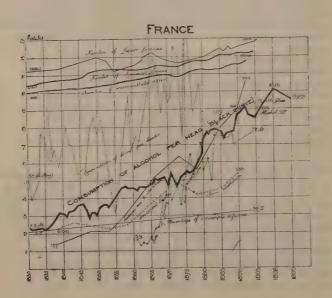
On the other hand, there are two countries of Europe Norway. where the consumption of drink, largely owing to wise legislation, has been steadily decreasing. The first is Norway, where it has come down from sixteen litres, containing 50 per cent. alcohol in 1830, to 3.68 litres in 1895; mortality from alcohol, suicides and crimes generally have, of course, diminished in like manner; paupers have become fewer, and the average wealth of the people increased.

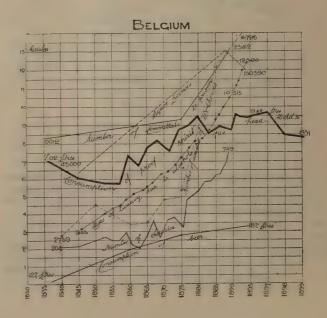
Turning to the neighbouring country, Sweden, we Sweden. find the same thing. Serious crimes, such as murder, rape, common assaults, and even quarrels and lawsuits, have diminished; suicides are less frequent; also deaths from alcoholism, of course, and even syphilitic diseases, and here is a further reverse of the picture in France, for the percentage of conscripts refused has steadily diminished, showing an elevation in the standard constitution of the people.

No one should assert that the rise and fall of crime, Alcohol as disease, lunacy, death-rate, etc., is only affected by the one of the amount of drink consumed. There are undoubtedly factors of several other causes at work in both directions. But Physical no reasonable man can fail to be convinced that, as far Deterioraas it goes, the increase of the consumption of alcohol tion. is shown hereby to be injurious to the health of a nation, and thus tends to its physical deterioration.









XII .- ACTION OF ALCOHOL ON THE LIVING CELL.

By J. James Ridge, M.D. and M.D. (State Medicine), B.S., B.A., B.Sc. LOND.,

Medical Officer of Health for Enfield.

Constitution body.

It is a truism to say that the human body is composed of the human of cells and their products. It originates from a single cell, which, by repeated cell division, is multiplied and then differentiated to form the various organs and tissues. When we know how alcohol behaves to individual cells, we can very certainly understand what its effects will be on the billion-celled mass which we call the human body.

Action of Alcohol on Cell growth.

An interference with the natural growth of protoplasm by the action of alcohol was noticed by me in 1879 in the growth of the seeds of cress. It is always a matter of astonishment to me that as little as one drop in a quarter of a pint of water can exert an adverse influence on the growth of protoplasm.

The same effect is seen on the growth of geraniums, as I showed in 1891, plants watered occasionally with water containing one per cent. of alcohol soon beginning to droop and wither.

I have watched the growth of common chara under the influence of 1 per cent. of alcohol, one drop in two ounces. The chlorophyll loses its green colour; this accounts for the pale colour of the cress in the presence of alcohol.

The same fact has been established for animal protoplasm. Sir B. W. Richardson found that medusæ were killed by one in 4,000 of alcohol (one drop in 8 oz). I have observed a similar deleterious action of alcohol on Daphniæ in proportion to the amount down to one drop in a quart of water.

The effect on the development of eggs is very marked. Action of The eggs of a blowfly kept moist with alcohol and water Alcohol on do not mature so quickly or not at all. A precisely the develop-similar interference can be evidenced with the develop-ment (fEggs. ment of frog's spawn, small percentages of alcohol having an incredibly bad effect. Feré has noticed the same injurious influence of the vapour of alcohol on the development of hens' eggs.

These facts are of immense importance, as we realise the Effect of great increase of drinking among women in recent years. Alcoholism In past centuries there have been many instances of among drunken nations, whose vitality does not seem to have Women. been greatly interfered with. I attribute this to the fact that in those days the women, the mothers of the race, were sober. But if the mother as well as the father are given to drink, the progeny will deteriorate in every way, and the future of the race is imperilled.

#### APPENDIX XVII.

[The Appendix originally intended to have been numbered XVII. has been printed in Volume I. as Appendix VA.]

#### APPENDIX XVIII.

#### (a) LEAFLET ISSUED BY THE HEALTH DEPARTMENT OF SHEFFIELD.

"Advice on the Feeding and Rearing of Infants,"

Issued by the Health Department, and intended to be followed in all cases except where a Doctor is in attendance and gives special instruction.

- $^{\rm l.}$  Infants should have no food but Milk for the first six or seven months of their life.
- 2. They should, if possible, be fed at the breast, because breast-fed infants are much healthier than bottle-fed infants. They should have the breast every two hours during the day, and every four hours during the night for about ten minutes, and as they grow older, less frequently. Irregular feeding upsets the infant's digestion. The infant must not be allowed to go to sleep at the breast. In order that her milk may be wholesome, the mother should lead a healthy life, eat only plain and wholesome food, and not take intoxicating drinks, such as spirits and beer. If her nipples are sore, she should wash them with warm water before and after the child is fed and apply glycerine to them.
- 3. If from want of milk or other absolutely unavoidable cause the mother cannot suckle her infant, it will be necessary to feed it on fresh cow's milk. For a newlyborn infant the cow's milk should be mixed with an equal quantity of water, and should be sweetened and boiled before use. If the milk curdles on the child's stomach, barley-water may be used in its preparation instead of plain water, or one or two tablespoonfuls of lime-water may be added to each pint of milk and water. infant gets older, the amount of water should be lessened, until at the end of six months about one and a half pints of pure milk without any water are given. Infants are of pure mink without any water are given. Infants are often starved by being given too much water with their milk. The newly-born infant should be fed every two hours during the day, and every four hours during the night. As the infant grows older its meals should be less frequent. Irregular feeding upsets the infant's digestion.

Bottles should not have long tubes, because it is impossible to clean a long tube. The best kind of bottle has a rubber teat, which can be turned inside out and properly cleaned. Only sufficient milk for one meal should be put in the bottle at a time, and both bottle and teat should be thoroughly cleaned with water and soda after each time of using, and boiled once a day. If any old milk is left in the bottle or its fittings it will sour the next meal, and give the infant diarrhea or a disordered stomach.

#### 4. Diet from Six Months to Twelve Months old

First meal, 7 a.m.—A suitable quantity of some infant food, such as Mellin's, Ridge's, Frame, Benger's, Neave's, etc., prepared accordingly to the directions, with twelve tablespoonfuls of milk.

Second meal, 11 a.m.—Twelve tablespoonfuls of pure milk which has been brought to the boil.

Third meal, 1.30 p.m.—Same as first. Fourth meal, 5.30 p.m.—Same as second. Fifth meal, 10 p.m.—Same as first.

#### Diet from Twelve to Eighteen Months old.

First meal, 7 a.m.—Bread boiled in milk, or oatmeal porridge with plenty of milk.

Second meal, 11 a.m.—Twelve tablespoonfuls of milk. Third meal, 1.30 p.m.—Bread crumbs and gravy, or a lightly-boiled egg and bread and butter, or a milk pudding.

Fourth meal, 5.30 p.m.—Bread and milk. Fifth meal.—Milk to drink.

5. Infants should on no account be given all sorts of things to suck, such as carrots, turnips, raw potatoes, or unripe fruit, neither should they be given bits from their mother's or father's plate to get them used to it.

- 6. Infants should be given a warm bath every day, and soap should be used to every part of the body, including the head. The whole of the body should be carefully and thoroughly dried, and dusted with fuller's earth or boracic powder, especially the folds of the skin. Infants should not be allowed to lie in wet or soiled napkins; the part covered by the napkin should be bathed and powdered each time the napkin is changed.
- 7. Flannel and wool are the best materials for a baby's clothes. They should be warmly clothed, but not with many clothes. Their clothing should not fit tightly about the body, but loosely, so as to give free play to the lungs. The limbs should be covered equally with the body.
- 8. Infants should not be placed on the floor, as they are thus exposed to draughts and infectious dirt.
- 9. Great care should be taken of the infant's eyes. Bathing the eyes with warm water containing a little boracic powder will prevent them becoming sore.
- 10. Mothers are strongly warned against giving their children teething powders or soothing medicines to send them to sleep.

- 11. When an infant continues to suffer from indigestion or diarrhoea, in spite of every care in feeding, the mother should consult a doctor, who will advise her how to act. It is a good plan to have an infant weighed from time to time. A thriving infant should gain weight steadily.
- 12. The air of the room occupied by the infant should be kept fresh by opening the window. The bedroom window should always be left open all night. Night air is not harmful either for infants or children, or grown-up people.
- 13. It cannot be too strongly impressed upon mothers that young infants can be much more easily protected from disease by careful feeding and management than they can be cured when disease actually occurs. An enormous number of children die every year in Sheffield from diarrhæa, more especially in the months of August and September, and it is quite certain that if they were fed and reared according to the directions given above, and were not given sour milk and other quite unsuitable food, and, at the same time, they, their clothes and their homes were kept clean, the majority of these infants would not die.

#### (b) LEAFLET ISSUED BY THE WAKEFIELD AND DISTRICT SANITARY AID SOCIETY.

"How to REAR A HEALTHY BABY."

FOOD.—If the mother's milk is good and plentiful, the child should have no other food whatever until seven months old. If the mother has not enough milk, cow's milk should be given in addition to it, but not in place of it: the two milks will not disagree. While suckling, the mother should take plain and wholesome food: stimulants are not necessary, and spirits are distinctly harmful.

TIMES OF FEEDING.—For the first month the baby should be fed regularly every two hours by day and every four hours by night. In the second month, feed every two and a half hours by day: in the third month, every three hours by day and twice during the night. Gradually increase the interval between the feeds, so that at seven months old the child is fed once every four hours by day and once in the night, if awake.

On no account must a baby be put to the breast every time it cries: it may be crying for some other reason than hunger. Look at the clock, and, if it is not jeeding time, do not jeed it: a teaspoonful or two of clean cold water will often comfort it. Fretfulness, stomach-ache and sickness are caused if an infant is fed irregularly or too frequently.

BOTTLE FEEDING.—If there is not enough mother's milk, the diet must be supplemented by fresh unskimmed cow's milk. A bottle prepared as follows should then take the place of one or more feeds at the breast.

All milk used for children should be well scalded by placing in a clean jar and keeping on the fire in a saucepan of boiling water for twenty minutes. Do this as soon as the milk comes to the house. Then put the jar in a cool place, and keep it covered.

The following are the proper amounts for each feed:—
For an infant a week old use one tablespoonful of this
milk, two tablespoonfuls of water or barley water, and a
small lump of sugar.

Gradually increase the quantities, so that by the fourth week each feed consists of two tablespoonfuls of milk to three or three and a half of water, with a lump of sugar. By the third month use three tablespoonfuls of milk and three of water. From three to six months old the child should have eight to twelve tablespoonfuls in each bottle, of which not more than two or three are water. From eight months onwards the child should be able to digest pure milk, scalded and sweetened, and should have one and a half pints a day.

If the infant is having no mother's milk, the cow's milk should be enriched, if possible, by adding a teaspoonful of fresh dairy cream to the milk for each bottle before scalding. Do not use the cream sold in jars, as it may have chemicals added to make it keep, which would be nurtful to a baby.

When the right quantity of milk, water, cream, and sugar has been mixed, the food should be warmed and

placed in a perfectly clean bottle. Use an old fashioned "boat bottle," with a teat that can be turned inside out for cleaning. Tube bottles are dangerous. Directly after each feed cleanse the bottle and teat thoroughly, and place them in clean cold water till wanted again.

If a child does not take all the food, what is left should not be kept. Never give milk that is not quite fresh to any child.

WEANING.—As a rule a child should be gradually weaned at the eighth month. Suckling beyond this time is most injurious to mother and child, and it is untrue that the mother will not become pregnant while she is suckling. Take care that the baby has plenty of cow's milk after weaning: a healthy weaned child of nine months old needs at least one and a half pints of good scalded milk a day.

By the time the child has 4 teeth, it may have its milk thickened with baked flour, rusks, toasted bread, or the prepared infant's foods. On no account give any sort of bread food before the teeth are through, as the infant cannot digest it, and convulsions may be caused. Watch over the child's feeding carefully. Do not give it "just what we have ourselves." Do not let the other children give it "little bits."

When a child is 10 months old, it may have milk pudding, bread and milk, porridge, egg, or a little broth, but still give it plenty of milk. Train it to regular meal times, and to eat and drink slowly.

Never give the baby tea or coffee. Children would be much sturdier if given warm milk instead of tea or coffee till four years old.

The following things are also harmful for little children: Beer, spirits, wine, new bread, currants, unripe fruit, soothing syrups, or teething powders. The use of the two last undermine the health of many children. No medicine should be given except by doctor's advice.

A baby's clothing should be clean and warm, but not tight about the body.

A baby should be washed all over every day with warm water and soap. Also, night and morning, fix a piece of clean rag firmly round the finger, dip into clean water, and thoroughly wash the gums and roof of the child's mouth. Burn the rag. You are strongly advised not to use a comforter. It is often the cause of thrush and other troubles.

A baby should be taken out whenever possible if the weather is fine. Babies need pure fresh air—indoors and outdoors—even more than grown people: those who have the most of it will be the least liable to bronchitis, and will sleep the best. An infant should have a separate cot, and not stay in the mother's bed during the night.

A healthy baby should gain four to six ounces in weight every week. If it suffers from diarrhæa or indigestion, in spite of every care, take it to a doctor without delay.

#### APPENDIX XIX.

## DIAGRAMS AND PHOTOGRAPHS ILLUSTRATIVE OF PHYSIQUE OF SCHOOL CHILDREN, PREPARED BY DR. ALFRED EICHHOLZ.

#### HEIGHT MEASUREMENTS.

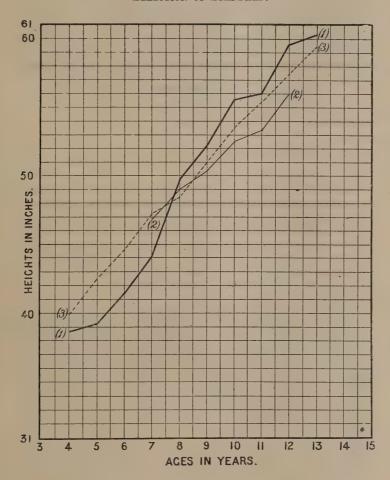
#### METHOD.

- (1) The curves show the average height of twenty children of each year of school age.
- (2) Heights are charted vertically and ages horizontally.
- (3) Girls above eleven are usually taller than boys of same age. In charting, an average of boys' and girls' heights has been struck.

#### SUMMARY OF POINTS BROUGHT OUT BY HEIGHT MEASUREMENTS.

- (1) London shows greater extremes of excellence and superiority than provincial towns. The difference between the good and the poor types is very grave.
  - (2) The best children are practically equally good in all towns.
- (3) In the case of younger children, the worst in London are lower in stature than the worst elsewhere—Manchester, Salford, Leeds.
- (4) The curves in Manchester and Salford are flatter than elsewhere, due possibly to the wider prevalence of rickets, but associated also probably with the Celtic strain in the population.
- (5) Height curves are easier to obtain, and display discrepancies better than weight curves. They are, therefore, preferable for purposes of statistical examination.

#### SELECTION OF STANDARD.



### (1) Buckinghamshire.

High Wycombe Central Schools. (Small country town of good type. Southern).

#### (2) Yorkshire.

Ripon School. (Small country town of good type. Northern).

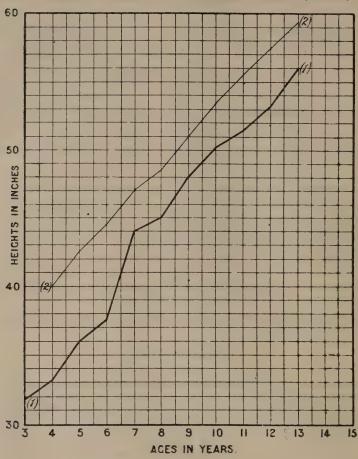
#### (3) London.

Honeywell Road Board School, Wandsworth Common (Standard). (A good type London School).

Note.—Honeywell Road has excellent infants', boys' and girls' departments. Physical exercises a speciality in all departments. The rate of growth is more uniform than in either of the country schools and being of a high grade, this school was chosen as a standard of comparison.

74 APPENDIX:

A LOW GRADE TOWN SCHOOL IN A NEGLECTED DISTRICT (LONDON),



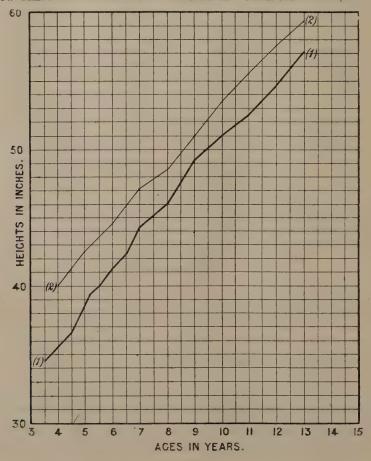
(1) Lambeth.

Johanna Street Board School.

(2) Honeywell Road (Standard).

Note.—Irregular growth and severe retardation of a very grave nature.

A LOW GRADE TOWN SCHOOL IN A CRIMINAL AND NEGLECTED AREA (LONDON).



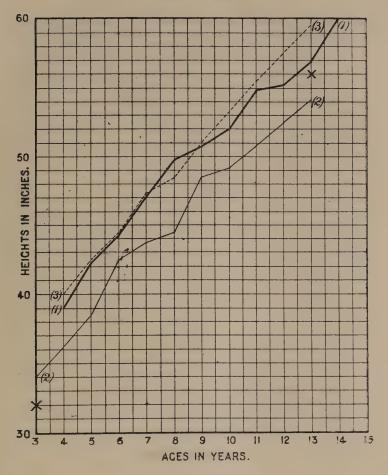
(1. Notting Hill.

St. Clement's Road Board School.

(2) Honeywell Road (Standard).

Note. Conspicuous retardation in growth, only less than Johanna Street.





(1) Ducie Avenue Board School.

A school of the best type.

(2) Sharp Street.

A notably bad slum area.

(3) London.

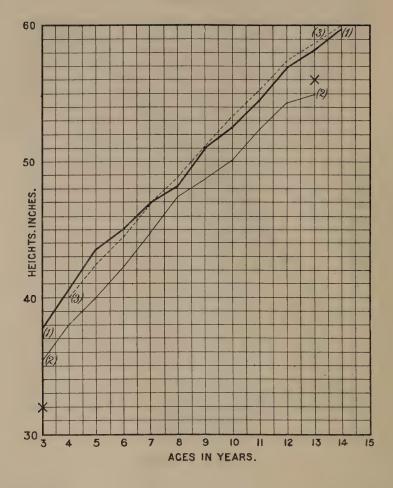
Honeywell Road (Standard).

× — × Johanna Street (London) limits.

Note.—Good population in Manchester practically as good as best in London (Apparent falling off in Ducie Avenue at later ages, probably associated with the transference of the best children to the Central Higher Grade School and other higher schools).

Curve of worst population is flatter than corresponding curve in London. Adolescent population more stunted (rickets). The difference between best and worst is very serious.

#### SALFORD.



- (1) Grecian Street Board School.
  Better class.
- (2) John Street Board School.

  Poorer class.
- (3) Honeywell Road, London (Standard).

x — × Johanna Street (London) limits.

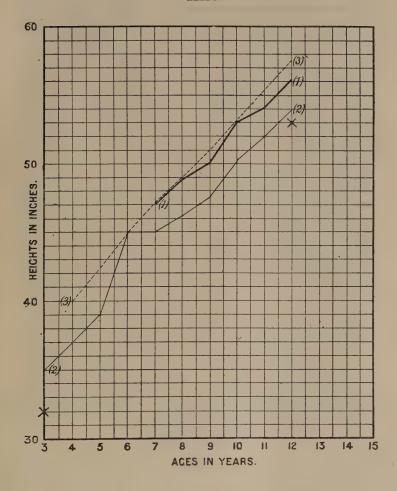
Note.—Good population in Salford as good as best in London.

Difference between worst and best not so great as in London.

Salford low type population is not so bad as corresponding population in London.

Low type curve in Salford flatter than low type curve in London (more rickets in northern towns).





(1) Brudenell School.

Good Type.

- (2) Sweet Lane Board School.

  Poorer neighbourhood.
- (3) Honeywell Road (Standard).

× — × Johanna Street (London) limits.

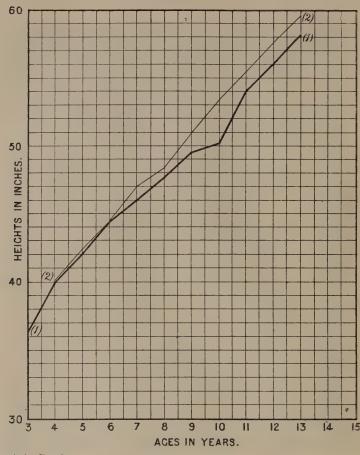
Note.—Good type Leeds School almost as good as best London Schools, though somewhat depressed at senior ages.

The divergence between "good" and "bad," though significant, is not so acute as in London.

Leeds poorest population on the whole much better than poorest in London.

No flattening of curves as in Manchester and Salford (Probably less rickets).

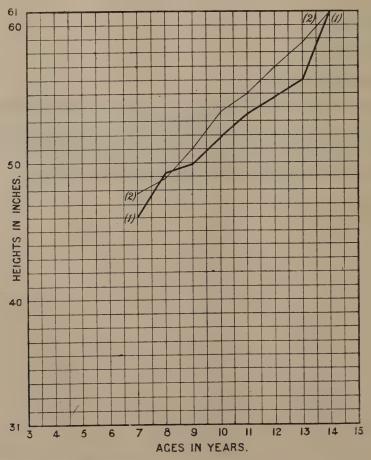
A POOR GRADE SCHOOL IN AN IMPROVING NEIGHBOURHOOD (LONDON).



- (1) Bethnal Green, Virginia Road. Improving circumstances: Erection of modern dwellings by London County Council.
- (2) Honeywell Road (Standard).

Note.—Children fairly good—just short of the best.

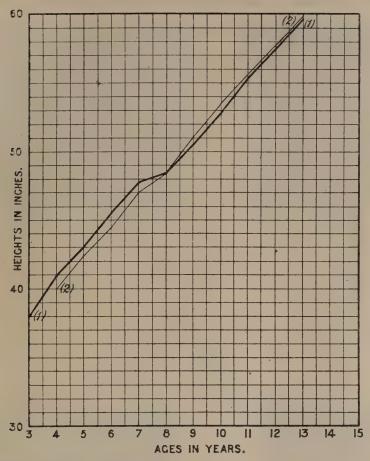
A SCHOOL IN A POOR INDUSTRIAL NEIGHBOURHOOD UNDER EXCELLENT DRILL EXERCISES AND ORGANISED GAMESFOR TWELVE YEARS (LONDON).



- (1) Eltringham Street Boys' School, Wandsworth.
- (2) Honeywell Road (Standard).

Note.—Shows recovery of physique at limit of school age.

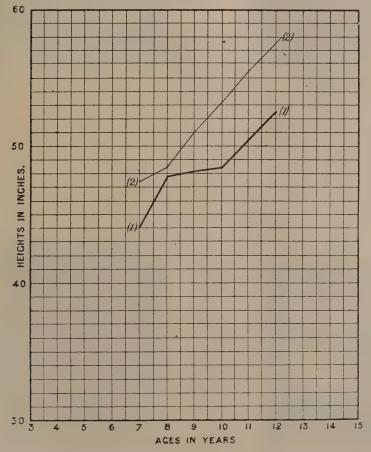
A BOARD SCHOOL FREQUENTED BY CHILDREN OF ALIEN IMMIGRANTS (JEWISH), LONDON.



- (1) Houndsditch Gravel Lane Board School.
- (2) Honeywell Road (Standard).

Note.—A high grade rate of growth.

A SCHOOL FOR FEEBLE MINDED CHILDREN.

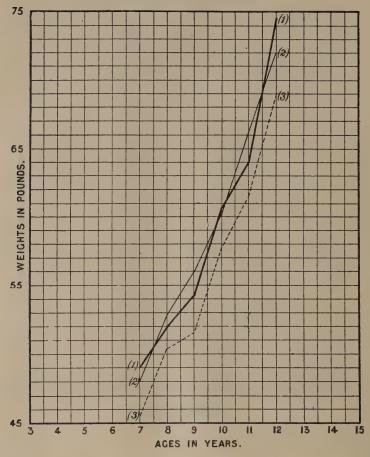


- (1) St. Clement's Road Centre, Notting Hill, London.
- (2) Honeywell Road (Standard).

Note.- Growth irregular and retarded. Retardation severe.

#### WEIGHT MEASUREMENTS—WHOLE SCHOOLS.

(FROM DR. HALL'S NUMBERS.)



- (1) Country School (Ripon).
- (2) Good Town School (Brudenell School, Leeds).
- (3) Poor Town School (St. Peter's and Sweet Lane, Leeds).

Note.—General retardation of poor children.

General parallelism between rural and better town children.

Weight curves show discrepancies less distinctly than height curves. As both curves show similar results, height curves are preferable for statistical purposes on account of their distinctness.



LANT ST. BOARD SCHOOL (SOUTHWARK), 1875. Lowest type.



HOLLAND ST. BOARD SCHOOL, BLACKFRIARS.

Lowest type; present time. Compare with Lant St., 1875, and note improvement.



LANT ST. BOARD SCHOOL (SOUTHWARK), 1878. Slight improvement.



HONEYWELL RD. BOARD SCHOOL, WANDSWORTH COMMON.

Best type of London child, present time.



 $\begin{array}{cccc} {\bf LANT} & {\bf ST.} & {\bf BOARD} & {\bf SCHOOL} & ({\bf SOUTHWARK}), \ {\bf 1902.} \\ & & {\bf Great} & {\bf Improvement.} \end{array}$ 



MENTALLY DEFECTIVE CHILDREN, IRWELL ST. SALFORD.

#### APPENDIX XX.

#### Appendix to Evidence of Mrs. Greenwood.

#### CASES OF RICKETY CHILDREN INVESTIGATED IN SHEFFIELD.

#### (1). 20, Court, A-Road.

A back to back house containing three rooms, rent 9d. per week, occupied by a man and wife and five children. Eldest boy twelve years, at school; a boy ten years has a diseased spine, girl three years, small; child seventeen months, cannot walk, and a baby ten weeks

at the breast. Husband gives wife 20s. per week.

History of child seventeen months. Was weaned at three months and fed on "pobs" (bread boiled in water) and ld. worth of milk each day until it was twelve months old, when no more milk was given, now lives on bread and butter and tea, dinner same as others. At the present time 1d. worth of milk taken daily for whole family.

#### (2). 28, W-B- Road,

A back to back house in the suburbs, with three rooms, rent 4s., occupied by a couple and three children. Eldest three years, second child two years, very rickety, cannot walk (fontanelle not closed) and a baby seven months at the breast.

Husband gets up early and makes own breakfast,

wife never gets up until about 9 a.m.

Diet of children, breakfast, bread and butter and tea; dinner, potatoes, gravy and tea; at 5 p.m., bread and butter and tea; supper, tea and a piece of cake, several slices of bread and butter between meals. No milk taken at all. The woman rarely goes out except to see mother in next street; has no mail-cart, husband gives wife 20s. per week.

#### (3). 16, H-L-

Back to back three-roomed house occupied by a couple and two children, husband gives wife 20s. week, rent 3s. 6d.

Child fifteen months cannot walk, was brought up on the bottle which it left off at twelve months; now it has breakfast, bread and butter and tea; dinner, potatoes, Yorkshire pudding, etc.; tea, bread and butter and tea; supper, bread and butter and a "sup" of milk. Slices of bread and butter in between meals whenever it wants it. Appearance pale and flabby, there is another child eight weeks old having the breast. They rarely go out.

#### (4). 4, A-St.

Emma D., aged three years, small, enlarged joints, knock-kneed. An illegitimate child whose mother goes knock-kneed. An illegitimate child whose incode good out cleaning, has never had breast or bottle, was reared from the beginning on "pobs" (bread boiled in water) and a little milk added, has had no milk since twelve months old, now lives on bread and butter and tea, with "whatever is going" for dinner. Is eating all day pieces of bread and butter.

#### (5). 7, S - x St.

Occupied by a couple and four children, contains a small shop, living room behind and two bedrooms; youngest child sixteen months, not weaned, puny and white: Freddy, three years, very rickety, small and deformed; George five, and Nellie eight, both small for age. One pint of milk taken daily for whole family. Mother very ignorant and indignant when told the children were not having the right kind of food. Man gives wife 23s. week, and she sells pastry and sweets.

### (6). 2 Court, 3 House, H-St. (Two bedrooms).

Occupied by a man and wife and four boys, aged ten, eight, seven and three years. The youngest cannot walk, his food is the same as the others but he is eating bread and butter all day long. No milk taken. Man gives wife 23s. per week.

#### (7). Back of 147, C-St. (Two bedrooms).

This is a back to back house with a small scullery. containing sink and copper, built out in front of the door and keeping light and air from the living room. In addition the house is so situated with regard to other buildings that it receives less sunlight and air than it otherwise would. It is occupied by a man and wife,

seven children and grandmother. They have lived in this house eleven or twelve years. The eldest son, eighteen years, is strong and well; Annie, thirteen years, is pale and thin; Ellen, eleven years, legs very deformed; Willie, nine years, ditto; Clara, six years, bow legs and eczema; boy four years, very rickety, and a baby sixteen months not yet weaned and getting rickety. The house is generally dirty and the windows are seldom opened, several of the children have been operated on to straighten their legs. Cause of this condition, overcrowding, want of sunshine and air and improper food. No milk has been taken until recently and by the advice of the lady inspector. The old grandmother who is paralysed sits over the fire and nurses each child as it comes so that it rarely goes out or uses its limbs and no breath of fresh air is allowed in the house.

It is a most pitiable sight. Mrs. F. has at last promised to remove to another house.

#### (8). 2 Ct., 1 H. B—St.

A back to back house, very dark, occupied by a couple and three children. Has had six but three died of convulsions, the youngest seven weeks, at breast, the next, aged two years and eight months, has a large head and enlarged joints and all the symptoms of rickets. Mother says she suckled him until he was over two years old, indeed she was pregnant with her next child. Had to be told by the doctor to wean him.

#### (9). 65, S-St.

An infant seven weeks old being fed on breast, arrowroot biscuits and gravy, and sometimes given a mussel to suck ..

#### INSTANCES OF WASTE OF LIFE.

#### Mrs. R.—.

Age about thirty-five, had been married fifteen years. Husband a hawker, wife works at a rag pickers. Very degraded people who both drink. Two children living, eleven and twelve years.

Mrs. R. was visited owing to an inquest held on a boy burned to death. When questioned as to number of children lost, she seemed much afraid of incriminating herself, but finally admitted the following facts.

That when she lived in S—Street, she lost a child named Florrie, six months, of bronchitis. In M.— Street, she lost Harriet, four months, of convulsions. She removed to Street, where she lost one or two children (she could not quite remember, but knows Maggie, six months old, died there.) When asked of what disease she said "oh, the same complaint." She then removed to H—C.— (all houses in the lowest part of the city) where John five-and-a-half years was left alone in a room with an unprotected fire, and was burned to death. the inquest it came out that she was in the habit of leaving the children alone. She has since lost another infant, seven months, of "Marasmus enteritis," the child was a "bonny baby born."

#### Mrs. S-.

Aged forty, been married twenty-two years, has had fifteen children born alive. Seven living aged, twentytwo, twenty, eighteen, thirteen, eleven, and six years, and an infant seven months. Mrs. S. has lost three sets of twins all under or about twelve months, and two other infants eleven months and three months.

Has lost seventeen children, stillborn and living; cannot remember the names and ages of those who died in infancy except the following: -John, James, and Charles (triplets,) lived twenty-four hours only, Charles II., lived to nine months, "teeth," cause of death. Sarah Ann, nine months, died of convulsions, Joe, five months, died of convulsions. Eliza, the 18th eighteenth child lived, and is now twenty-one years old, she is the only one who survived the first year of life.

#### INSTANCES OF OVERCROWDING.

(1). 58 M- Street.

House contains two bedrooms, a living room, and scullery. The occupier was Mrs. T. a widow, and living with her were three daughters, Nellie, twenty-one, Emily, nineteen, and her infant, and Ethel sixteen years. In addition there were Mr. and Mrs. F. (Mrs. T's father and mother); Tom F. (a brother of Mrs. T.) his wife and their two children, seven and two years; Emily F. (a sister of Mrs. T.), and Tom R. (who were living together as man and wife), and their two children; also William F. (an unmarried brother) and Lena F. another sister of Mrs. T. Upon a visit from the inspector these people dispersed, and the F's have been again proceeded against in another part of the town for overcrowding.

(2). 28, S - Square.

Containing two small bedrooms, a living room and scullery. Occupied by John B. and his wife; a married son and his wife and infant; three other sons, aged twenty-one, twelve, and eight years; a daughter, nineteen years, and her infant; and Sarah and Edwin F. and their three children. These people left the house shortly after a notice was served to abate the overcrowding.

(3). 18, N - Street.

A small house with one sleeping room, and one living room. The occupier was John S. a widower with two girls, thirteen and eight years. In the same bedroom slept Samuel S. (a brother), his wife and four children.

(4). 10, K — Street.

A house with a living room, bedroom, and garret. In the bedroom slept four persons over ten years of age, and in the garret six persons over ten years. (5). 12, M-Lane.

House containing one living room and two bedrooms. larger one 875 cubic feet, smaller one 513 cubic feet. In the two bedrooms were sleeping father and mother, five sons, aged twenty-three, nineteen, seventeen, eleven, and seven years and three daughters, twenty-one, fourteen, and five years.

(6). 2, N — Lane.

A house with one bedroom in which slept man and wife; widowed daughter and her two children, eight and ten years; other daughters, twenty-two and ten years, and sons, fifteen and thirteen years. There were fourteen fowls sleeping in two cupboards in the living room below.

Out of 100 houses specially investigated and measured, twenty contained two rooms only, forty contained three rooms and forty contained four and sometimes five rooms. In twenty houses not more than two persons occupied the bedroom or bedrooms. In eighty houses more than two persons occupied each bedroom.

Out of the latter number (eighty) fifty-one were not overcrowded taking 300 cubic feet as a standard, but in twelve cases there was not sufficient separation of the sexes. Twenty-nine were badly over-crowded in every sense of the word. In fifteen houses the over-crowding was quite unnecessary as there were other rooms not made use of.

(Mrs.) F. J. GREENWOOD,
(Sanitary Inspector),
Sheffield.

#### APPENDIX XXI.

Appendix to Evidence of Mr. T. C. Horsfall

We have in Manchester two classes of boys whose working-time is spent chiefly in the open air, the boys who are employed to sweep up horse-droppings in the busiest streets, and the boys, called in Manchester "nippers," who work under lorrymen. Both of these sets of boys get much exercise. Their physique, though often not very good, as a rule is superior to that of the boys who work in mills and offices, and they have much more spirit.

Mr. Charles Russell, who has a very large amount of knowledge of the poorer classes of Manchester boys, tells me that the sons of "navvies" living in miserable homes in Manchester, if they become out-of-door workers, generally grow up into strong men. If exercise in the impure open air and under the dim light of Manchester causes the boys who take it when their school-years are over to be comparatively healthy and strong, it is only to be expected that Manchester children, living under homeconditions which are unfavourable to health, and who are destined to work in mills and offices, will suffer seriously from being kept in crowded school-rooms for a large part of five days a week, during the years when they are most susceptible to the influence of unfavourable conditions, unless great attention is paid to keeping the rooms wellventilated, well-lighted and, in winter, adequately warmed, and unless the children are enabled and encouraged to take much varied physical exercise, and unless the mental training they receive is well-chosen and given in right I have not visited very many elementary schools in Manchester, but I have recently had occasion to visit nine schools in Cheshire, some denominational and some provided, which doubtless have much in common with many of the denominational and smaller provided schools in other parts of the land, and I have found in a considerable proportion of them conditions in respect of ventilation, lighting and warming so bad, that they seem to me to be sufficient by themselves to ensure the stunting of the growth, and much injury to the health, of most of the children attending the schools. In the school in which the conditions were the worst, a school the average attendance at which is about 170, not only were the rooms badly lighted, and miserably ventilated, but also so badly heated that the temperature, taken by a thermometer, whose accuracy I tested, had been at 10 a.m. on four

successive days 43°, 42°, 45°, and 45°. Most of the children and of the teachers looked sickly. I hardly need mention that until recently no physical training of any value has been given in a large proportion of our elementary schools, and that the amount now given, which often does not exceed the minimum fixed by the Code, an hour a week, is quite insufficient in the case of most children. The influence of the poor teaching given in many schools by pupil-teachers, Article 68 teachers, and many teachers. who, though they have been trained in training colleges, have never thrown off the bad effects of the habits which they formed when they were pupilteachers, in causing physical deterioration receives far Such teaching, on the one hand. too little attention. makes it impossible for children to gain the knowledge and the habits of attention and industry which will enable them to earn good wages, the tastes and habits which will keep their minds and bodies healthy and prevent the temptations of drink, betting and licentiousness from being irresistible to them; and, on the other hand, it irritates the brains of the few children who continue to attend to it. The habit which many managers have of allowing children of three years of age, and of still lower age, to come into the infants' class makes it exceedingly difficult for teachers to deal with that class, as the teaching needed to enable children of nearly five to learn the subjects, of which they require some knowledge when they pass into the standards, is quite unfit for mere babies, and simply trains them to hate lessons and to form, often for life, the habit of closing their minds to them. Working Men's Club in Manchester, I sought in vain to find in the minds of the members, who had been "educated" in elementary schools in Manchester, some kind of knowledge, some kind of interest, which could make the study of some subject attractive to them. It is not generally known in England that our pupil-teacher system, which has hitherto made interesting teaching impossible in a large proportion of our schools, was tried in Germany when its supposed success in England in the days of Lancaster and Bell had called attention to it there. Petersilie, in his work on "Das Oeffentliche Unterrichtswesen im Deutschen Reiche" says that the German authorities soon came to the conclusion that in this

matter "England's best was Germany's worst" and discontinued the experiment of employing ignorant children as teachers.

The experience of Germany, where in many large towns all the elementary schools are supervised by medical men, has shown that schools can cause much injury to children which cannot be directly the effect of bad air, but must be in part the effect of keeping children too long in one position and of not letting them have enough varied exercise. Bardenheuer and Castenholz found that, while in the German schools which they examined there were no cases of appreciable curvature of the spine among children in their first school-year, 6 per cent. of those in their second year, 19 per cent. of those in their third school-year, 27 per cent. of those in the fourth, and 52 per cent of those in the fifth and sixth school-year, suffered from curvature. Scholder, Weith and Combe, who examined 1,290 boys and 1,024 girls in Lausanne found curvature of the spine in  $\Omega$ 3 per cent. of the boys, and in  $\Omega$ 6.7 per cent. of the girls. The number of cases increased rapidly as the length of time passed in school increased, till nearly the end of school life

			Girls	Boys
			per	per
			cent.	cent.
Children in their 8th year of age	-	-	9.7	7.8
Children in their 9th year of age	-,	-	20 · 1	16.7
Children in their 10th year of age	-	- }	21.8	18.3
Children in their 11th year of age	-	-	30.8	24.2
Children in their 12th year of age	-	-	30.2	27 1
Children in their 13th year of age	-	-	37.7	26.3
Above the 13th year of age		-	26.8	33.3

Dr. Wilhelm Schulthess of Zurich, from whose book on "Schule und Rueckgratsverkruemmung" (Leopold Voss in Hamburg) I take these statistics, indicates as the means needed to counteract the tendency of school to cause curvature of the spine, a considerable shortening of the time during which children are compelled to sit, the giving an interval for play every hour, systematic gymnastic exercise for an hour each day, the proper lighting of school rooms, and the provision of suitable school benches and desks.

In the year 1877 Geheimer Regierungs-Rat Dr. Finkelnburg showed by the publications of the Prussian Statistical Bureau that of 17,246 young men, who were entitled by their higher education to serve as One-Year Volunteers, only 20 per cent. were physically qualified to serve, while of the ordinary recruits who were loss highly educated, from 50 to 55 per cent. were physically fit for service.

It seems to me impossible to doubt that the confinement of children in schools in which the conditions needed for health have not been provided, has been one of the principal factors in the production of physical deterioration since 1870. Mr. Marr, the Warden of the Men's House of the University Settlement in Ancoats, tells me that at the meetings at, and in connection with, the Settlement, which bring together a large number of working people, he notices that "usually the older men and women are better built and taller than the younger ones (i.e. those from twenty to thirty)." Other observers say that they have noticed similar inferiority on the part of young men and women to men and women of the immediately preceding generation in villages as well as in large towns.

Much injury to health is certainly caused in Manchester and Salford by the bad ventilation and lighting of a very large proportion of the offices in which clerks do their work. As clerks are often compelled to work until very late at night, it is very desirable that the rooms they occupy shall be well ventilated and well lighted and warmed. It is certain that as a rule offices which are not inspected are less wholesome than the rooms in mills which are inspected periodically. In the majority of cases the neglect of employers to provide the conditions necessary for health for their clerks, is due to thoughtlessness, and a single visit to each place where persons work for hire by a competent inspector would doubtless suffice to ensure a great improvement in the conditions of work for thousands of people. One of the most unwholesome rooms that I have known in Manchester was one occupied by a clerk of one of the most enlightened and kind-hearted members of the Manchester Town Council. The late William Morris, who hated impure air and water as much as any man I have ever known, told me that the usefulness of inspection was brought home to his mind when

his attention was drawn by an inspector to the fact that his works at Merton Abbey were polluting a stream by an escape of colouring matter of which Morris was not aware.

All those members of the Sanitary Association, and of Manchester associations with cognate aims, who have given attention to the habits of the people with regard to food, agree in believing that bad health and physical weakness are largely caused by bad choice of food, due in some cases to poverty, in others to ignorance, and in very many to depraved appetite. Miss Margaret Simpson, who does excellent work in connection with the Church of England Temperance Society, tells me: "There is no doubt that numbers of working girls in Manchester and Salford have totally insufficient food. Roughly, I believe the following reasons account to a large extent for the underfeeding:—

- 1. From childhood the girls are used to all sorts of unsuitable food, pastry, cakes, etc., instead of nourishing food, and to taking it in snatches, probably standing at table and eating hurriedly. So they do not acquire a taste for sensible food, and get into the habit of eating irregularly and uncomfortably.
- 2. When the girls go to work they nearly always hand over their wages to their mothers, who give them a trifle for pocke money, and if they cannot return for dinner, a copper or two only for dinner. Some of the better mothers make up little dinners for the girls to take out.
- 3. The girls have no taste for sensible food, and the heated rooms in which they work tend to make their appetites jaded and unhealthy, so instead of making the best of the few pence they have, they buy cakes and pastry, or chipped potatoes, or fried fish and pickles, anything they consider "tasty."
- 4. Low wages. In many cases the girls really do not earn a living wage, so cannot get proper food. We had a girl at the "Cosy Corner" who had twopence once a week to spend on her dinner. I do not know what she did on other days.

It is most difficult to get the girls to eat sensible food and in really sufficient quantities, even when provided. One of the girls, who belongs to St. Philip's Club, said that she had not tasted bread for more than a week. She takes biscuits to work for breakfast in preference to bread and butter, and so on. The same girl comes for dinner once a week to the club, and at first it was difficult to get her to take some of the most ordinary food. She would not touch potatoes, and declined minced beef, because she did not like it. Yet this girl comes, we know, because she has poor wages and hard times at home, and she is a most respectable, well-meaning girl. This sort of thing is typical. The girls do not want to have good food in many cases. They do not seem to know what a healthy appetite is. If we go for a day's picnic into the country with them, we find that they do not eat anything like what we ourselves require. The only time that I have seen them really enjoying good platefuls of meat and vegetables is when we go away with them in the summer for a week at the seaside. Then they have real appetites and appreciate proper food."

Miss Simpson, Miss Hobbs, Mr. Russell, Mr. Marr, all believe that the general use of stewed tea does very much to ruin health in our towns. Unfortunately the habit of using tea which has been long boiled or stewed is very general in country places as well as in towns. When I was a boy the finest set of people I used to see were the inhabitants of Craven, in Yorkshire. Mr. Walter Morrison, who lives in Craven, tells me "Charles Kingsley drove with me to Settle on market day. On coming back he described the men as the biggest and the handsomest in the world, and I agree with him. A doctor spoke to me about the farmers somewhat in this fashion: 'You know what big hearty chaps our farmers seem to be. Now I am old enough to have doctored their fathers, who lived largely on porridge with plenty of milk to it. They used to eat eggs and bacon and some meat. They got drunk once a week on gin and water, and their horses took them home. They lived as hale and hearty men till eighty. Their sons, some of them, think that porridge is not genteel; they eat white bread, not baked at home. They think it is not genteel to get drunk, so they make tea and leave it on the hob to stew. Only we doctors know how indigestion tortures them. They will not live to be eighty.' So far, my friend, I think myself that tea is doing as much harm as alcohol."

84 APPENDIX:

In my summary of evidence I mentioned as causes of bad health, children's lack of sufficient sleep, and filthiness of person and clothes among persons of all ages, due partly to the foulness of the air in manufacturing towns, partly to many other causes. Fifty years ago all but the principal streets in our towns were very dimly lighted, and so were the great majority of workpeople's dwellings and most shops, and comparatively few places of instruction and recreation, accessible to working people, were open late at night. Children had therefore much fewer reasons for wishing to leave their homes at night than they have now, and as a rule went early to bed. Now both homes and many streets even in poor parts of the towns are well lighted, and innumerable evening classes, boys' and girls' clubs, music halls and other places of wholesome and unwholesome recreation and instruction, and the interest of well-lighted streets have trained the majority of children to spend much of their evenings away from home, and to stay out of doors till very late. Nor can it be doubted that children have been made much more independent of their parents by modern habits. A large number of children are sent on week-days to the elementary school when they are mere babies, and to Sunday schools on Sundays, and if they go to church or chapel it is under the charge of Sunday school teachers and not of their parents. As many of the children who are thus separated from their parents by our educational system are also separated from them in the evenings by the influences of which I have already spoken, it is not to be wondered at that a parent's wish that children shall go early to bed often receives little attention.

Although many homes in our towns are kept surprisingly clean, workmen's houses in manufacturing towns as a rule are very inferior in respect of cleanliness to workmen's houses in the country, and Germans who have visited our towns, and English people who have visited workmen's houses in large German towns, say that English town homes are much less clean than the homes of German town-workpeople. Mr. James Johnston, who for many years has had a camp of Manchester girls of the working-class at the sea-side, tells me that lice are found on the heads of a large proportion of the girls. Miss Hobbs says that as a rule a mill-girl wears a chemise night

and day for a week.

There is abundant evidence to prove that if better conditions of life were created and maintained in Manchester and Salford the majority of the population have all the innate good qualities needed to enable them under the new conditions to rise to a much higher level of physical, mental, and moral health, of efficiency in work, and of good sense in recreation and rest, than that at which the majority of the population are now living. The high level of public spirit and of intellectual and moral life attained by Manchester men and women in the University Settlement in Ancoats would by itself suffice to prove that this is the case, while the admirable results given by the Ardwick and other industrial schools show that the class most strongly affected by evil conditions can by an improvement in the influences affecting it be enabled and induced to gain a satisfactory degree of physical and moral health and strength.

If the town councils of our large towns obtain and use powers to ensure that all new dwellings shall be potentially wholesome in respect both of their interiors and of their environment, that streets shall be wider, that there shall be a larger supply of playgrounds and parks and of vegetation in the new parts of the towns than in the old, and will inspect, or obtain the inspection of, all workmen's dwellings and of all places where hired persons are em-ployed, including the sleeping places of servants in all houses, the reform of our school system, which has now been begun, will suffice to effect a very great improvement in the health and the physique of the inhabitants of our towns. The chief object to be aimed at by all these means is to give the people more air and light, and another of the chief objects is to give them more wholesome exercise of body and mind.

I have already mentioned that Manchester boys who work in the open air have better physique than mill and office boys. The work of the Manchester and Salford Country Holidays Fund, which during the last nineteen years has sent nearly 15,000 children into the country for a holiday, lasting three weeks, has proved that the health of Manchester children, as a rule, at once improves very greatly under the influence of fresh air and exercise and good food. And there can be no doubt that, by the right use of our school system, the great majority of children can be enabled to feel both during and after their school life the good influence of fresh air, exercise, and good

As the most remarkable proof of the power of air, good food, and cleanliness of person to restore health and muscular strength that the world has ever known has been given in the last half dozen years by the new German sanatoria for the treatment of insured persons suffering from consumption and other diseases, and as the results obtained in the sanatoria are hardly known in England, it may be well to give here a part of a statement published in the German Reichs-Arbeitsblatt for October, 1903.

The statistics of the cases of illness treated by the Infirmity-Insurance Institutions in the years 1898 to 1902 have recently been published by the Reichs-Versicherungsamt. All the figures show progressive improvement from 1898 to 1902. The number of persons treated has greatly increased. The number in 1898 was 13,758; in 1899, 20,039; in 1900, 27,427; in 1901, 32,710; and in 1902, 35,949. Of the 35,949 persons treated in 1902 16,518 suffered from tuberculosis, and 19,433 from other diseases. The average time spent in a sanatorium by a patient who suffers from tuberculosis is about three months. The treatment of such persons consists mainly in an abundant supply of fresh air, plentiful food, attention to the skin, and instruction respecting health. A larger proportion of the persons who have recovered power to work in recent years have retained it than was the case in earlier years. Whilst of all the tuberculous patients Whilst of all the tuberculous patients treated in 1898 45 per cent. were still able to work after the lapse of the first, and 38 per cent. after the lapse of the second, year following the close of the year of treatment, the returns of the tuberculous patients of 1899 show 48 per cent. and 40 per cent. still able to work after the lapse of one year and of two years, and those of 1900, 49 per cent. and 41 per cent. Of the whole number of tuberculous patients treated in 1901 no smaller a proportion than 55 per cent. were still able to work after the lapse of a year from the close of the year of treatment. In the case of the tuberculous patients of the years 1898 and 1899, the diminution which took place in the number of those who were still able to work, from the end of the second year following the close of the year of treatment. to the end of the third year, was only 5 per cent. And after the end of the fourth year the diminution in the number of those still able to work is only small—about 2 per cent.

#### APPENDIX XXII.

MEMORANDUM, BY MR. E. T. CAMPAGNAC AND MR. C. E. B. RUSSELL, ON THE PHYSICAL CONDITION OF WORKING CLASS CHILDREN IN ANCOATS, MANCHESTER.

There is little doubt that the prime factor as regards physique of boys after leaving the Elementary Schools is the nature of their employment. In the great number of cases, the conditions of their home life remain the same as when they were at school, and the want of proper feeding from which many children suffer in the poor districts of the city continues, but there are in addition other factors which make considerably for physical deterioration.

#### BOYS.

- 1. Owing to the large amount of liberty given to youths when they commence to become wage earners, and the lack of sufficient parental control, boys from fourteen to seventeen or eighteen years of age frequently acquire habits of roaming the streets until a late hour at night, and fail to get that amount of rest before the next day's work which is necessary to maintain them in good health.
- 2. Unfortunately, the conditions of work in many of the factories and warehouses leave very much to be desired. There is not even yet sufficient inspection of these places, and in some of the subsidiary industries connected with the cotton trade, such as "hooking," "making up," &c., during the process of which dust from the chemical materials used in the production of the goods fly about, much harm is done by the particles of dust entering the mouths of the young persons engaged in the work, causing many to become anæmic and often to contract phthisis.
- 3. Another fruitful and one of the most unsuspected causes of deterioration lies in the long ingrained habit of tea drinking at breakfast and other times in the factories and foundries of the city. Tea drinking, if it really were so, might not be harmful, but, unfortunately, the mixture drunk can hardly be called tea at all. More frequently than not, boiling water is poured on to too large an amount of poor tea leaves and is left to stand until the tea has become almost a stew, and this dark and nasty mixture is drunk, sometimes three and four times a day, by hundreds of young lads, setting up frequently various forms of varicocele, and is responsible for several kindred evils (excessive costiveness, &c.) We were informed by the late Chief Recruiting Officer in Manchester some time ago that a very large proportion of young men rejected for the Army had been refused on account of ailments brought about by this practice.
- 4. The exceedingly low cost at which cigarettes may now be obtained is no doubt the cause of the grave increase in juvenile smoking, and this is having a serious effect upon the physique of many youths. Outwardly there is perhaps little sign of this, but considerable experience has caused us to notice that youths who smoke cigarettes largely are generally unable to take a prominent part in athletic exercises. Further information gleaned from the recruiting authorities goes to show that large numbers of young men are rejected because they have contracted a form of valvular heart disease through excessive cigarette smoking and are consequently unfit to undergo prolonged physical exertion.
- 5. We would point out that youths who follow outdoor occupations, although they may be living in the most overcrowded and unpleasant parts of the city, and are frequently on very short commons, more often than not develop fine physiques; it is the boy who enters the factory, workshop or office, who is ill-fed and unaccustomed to physical exercise, and given to smoking, who steadily goes down the hill.
- 6. As previously stated, many you he deteriorate considerably in muscular development after leaving school owing to following sedentary occupations. There being but little proper provision for gymnastic or outdoor

exercises made in the larger cities, the failure to teach gymnastics at school leads to an utter want on the part of large numbers to develop their bodies at all after leaving school. In later years many youths cannot get up enough energy to play football, even if a ground is available, and are content to moon about the streets at nights, smoking more or less bad cigarettes, as their only form of exercise, with the result that in later years, when they marry and settle down, their children are weak and puny.

We would point out that it is erroneous to suppose that alcoholic drinking on the part of youths is a fruitful cause of physical deterioration. As a matter of fact only a very small minority of boys up to eighteen years of age drink alcoholic liquors. It is not until later years, about manhood as a rule, that a young fellow falls a victim to the curse of drink.

- 7. Speaking generally, physique after school-days depends more on occupation than anything else, but there can be no reasonable doubt that, with better feeding, more exercise and gymnastic training when young, the avoidance of excessive cigarette smoking, and the substitution of some other drink for workshop consumption than tea, a very great improvement would be seen in no very long time in the general standard of physique of working class youths.
- 8. We are convinced that nothing would be more useful than regular medical examination in the elementary schools, particularly with reference to height, weight, and chest measurement, of the children from time to time, as inquiries could then be made with some degree of reliability as to the causes of the deterioration which might be noticed in given districts and given schools.
- 9. As to whether physique is regained at a later age depends upon many circumstances which we can hardly go into here. Provided a man remains steady and sober, more frequently than not we are of opinion that there is an improvement in physique, particularly if he marries wisely, but so frequently do young men (twenty-one and upwards) acquire drunken habits, with results destructive of all physique, that we do not care to state any positive opinion except as regards the man of sober and steady habits referred to above.

#### GIRLS.

In the case of girls, it would appear that at the outset work in factories and mills is found to be a great strain when, as is too often the case, girls entering upon such work are insufficiently or unwisely fed. They suffer an arrest of development and perhaps are permanently enfeebled. On the other hand, it seems to be perfectly clear that many of those who painfully feel the strain grow accustomed to it and recover their vigour. On the whole, the main cause of their poor physical condition seems to be ignorance. Ignorance as to food and its preparation, as to proper care of the body, the need of cleanliness and the need of good ventilation, and, like the boys, they suffer also from want of rest and sleep, and still more than the boys from want of wholesome exercise in the fresh air.

Perhaps it may be added that they suffer also from lack of interest; they have fewer sources of amusement than their brothers. It should be remembered further that the working girl's work is not always finished when she leaves the factory. She has duties at home to perform while she is living with her parents, and at an early age she undertakes at marriage still heavier duties in her own home and continues, at great cost of energy and freshness, the double task of housekeeper and wage earner even when she is the mother of several children.

Here the circle begins again—an enfeebled and hard working mother is unable to give careful attention to children who are especially in need of it.

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#### APPENDIX XXIII.

LETTER FROM MR. BENNETT, CAPTAIN OF THE 1ST CADET BATTALION "THE QUEEN'S," ROYAL WEST SURREY REGIMENT, AND TABLES OF MEASUREMENTS OF BOYS IN THE BATTALION.

Headquarters,
Queen's House, 31, Union Street,
Southwark, S.E.,
7th May, 1904.

DEAR SIR,-

Physical Deterioration Committee.

In reply to your letters of 22nd October, 1903, and 20th April 1904, I now forward you a statement of the result of my investigations, and I must confess that, considering the labour it has involved, the result is very poor and disappointing, and I fear will be of little use to your Committee.

This Cadet Battalion was started in Southwark in 1889 and now has companies in eight different districts in London; Southwark, St. Pancras, Stepney, Westminster, Chelsea, Pimlico, Bethnal Green, and Hackney Wick, but no regular records of the nature required have been kept except in Pimlico (height and chest and occupation), and Southwark (height and occupation). The standard of height for enrolment has always been not less than four feet eleven inches in all the companies, but there is no standard of chest measurement. The age limit for service in a Cadet Battalion up to 1901 was fourteen to seventeen, in that year it was raised by War Office authority to eighteen. About 10 per cent. of applicants are rejected as being below standard of height.

The class of boy, and with it the physique, varies much according to the district, the East End boy being badly developed compared to the West End. Stepney supplies the poorest class, and Pimlico the highest, Southwark being a medium between the two. All must be genuine working boys, and pay an entrance fee (by instalments) of from 2s. 6d. to 5s. according to district.

Boys' clubs (with gymnasium in most cases) are attached to each company. The effect of a month or two of drill and gymnastics is most marked in the manner in which boys carry themselves and walk, and is not lost after they leave.

About 10 per cent. of the Cadets pass into Regular Regiments and about 65 per cent. into Volunteer Corps. A larger number would join the Regulars but are rejected on account of height and chest, or bad teeth, which latter is a common disability, caused, I think, by careless feeding when young. Varicose veins are also a frequent cause of rejection, this appears to occur in cases where boys are messengers or errand boys constantly on their feet and running about.

"Occupations" have been difficult to classify, but I have endeavoured to distinguish as follows:—

Clerks.—Sedentary occupation, indoors.

Messengers.—Running about outdoors, and van boys.

Warehouse and office.—Includes packers and boys working partly in and partly out of doors, where skill is not required.

Skilled trades.—Includes "printers' devils" and muchine minders and boys learning a trade.

My experience in Southwark has been that a very large number of boys commence their working career in some branch of the printing trade, but they do not appear to stay long at it if they can get other work, and it does not seem healthy or suitable for boys, particularly in the case of those who carry the damp paper about to the machines.

Between 250 and 300 of the Cadets are annually taken to a military camp with some Volunteer Brigade for a week in August, and the amount of work they do and their capacity for marching are surprising, and the improvement in their condition at the end of the week (after good and regular feeding) is naturally very marked.

The Southwark boys wages vary between 7s. and 15s. a week, and when trade is slack many boys are out of work for weeks at a time.

I have little knowledge of their normal home surroundings, but when I have visited their homes (in sickness) I have always found them clean and comfortable and better than I expected.

I have been an officer of the Southwark Company for nearly fifteen years, during which period over 2,000 boys have passed through our hands in that district.

I am, Yours faithfully,
LANCELOT W. BENNETT (Captain),
1st Cadet Battalion "The Queen's."

The Secretary,

Physical Deterioration Committee.

I. SOUTHWARK DISTRICT.

Year.	Age.	†Number of Boys.	Average Height.
1894	14	4 ***	ft. in.
	12	11 (38)	A Salar Contraction
1900	99	11	5 11
1901		20	5 03
1902	,,	11	5 1
1903	"	10	5 01
1894	15	19	5 0½ G
1900	99 99	49	5 2
1901	••	54	5 21
1902	**	27	5 21/2
1903	29	27	5 1½
1894	16	.7	5 2
1900	**	23	5 21
1901	,,	29	5 2½
1902	99	33	5 3½
1903	27	41	5 3

Remarks.

In Southwark records of height only were taken in these years, 1894, 1900-3; and in 1894 the height appears to have been only roughly taken.

Very few boys were enrolled here over the age of 16.

ST. PANCRAS DISTRICT.

Year.	*Age.	†Number of Boys.	Average Height.
1930	15	29	ft. in. 5 1½
1901	$15\frac{1}{2}$	15	5 2
1902	15	11	5 3
1903	$15\frac{1}{2}$	20	5 3

\*In St. Paneras return the average age has been calculated and given.

†Number of boys of whom records of height or chest were kept.

PIMLICO DISTRICT.

Year,	Age.	*Number of Boys.	Average Height.	Average Chest.	Year.	Age.	*Number of Boys.	Average Height.	Average Chest.
1899	14	26	ft. ins. $5   1\frac{1}{2}$	ins. 293	1899	16	20	$5  3\frac{1}{4}$	3134
1900	29	21	$5 1\frac{1}{2}$	30	1900	,,	29	5 31/4	$31\frac{1}{4}$
1901	,,	12	$5 1\frac{3}{4}$	301	1901	"	18	$5 \ 3\frac{3}{4}$	32
1902	,,	8	$5  ext{ } 2\frac{3}{4}$	$31\frac{1}{2}$	1902	,,	22	5 4	$50\frac{3}{4}$
1903	"	2	$5 \ 2\frac{3}{4}$	301	1903	99	8	$5  3\frac{1}{4}$	$32\frac{3}{4}$
1899	15	46	$5  ext{ } 2\frac{3}{4}$	31	1899	17	2	5 33	$32\frac{1}{2}$
1900	,,	38	5 2	30	1900	99	3	5 5	$33\frac{1}{2}$
1901	22	26	$5  3\frac{1}{2}$	$30\frac{3}{4}$	1901	,,	10	5 4	$31\frac{1}{2}$
1902	,,	16	5 4	313	1902	>9	13	5 3½	$31\frac{1}{2}$
1903	22	12	5 4	313	1903	"	7	$5   5\frac{1}{4}$	$, 32\frac{1}{2}$

Remarks.

The records here have been carefully kept.

II.

OCCUPATIONS OF CADETS AT DATE OF ENROLMENT.

37		T		Ages.				
Year.	Occupations.	District.	14.	15.	16.	17.		
1000		Southwark	3	14	7			
to 1900.	Clerks	Pimlico	3	16	4	_		
1900.	Messengers {	Southwark	3	15	3	_		
	messengers	Pimlico	7	10	2	_		
	Warehouse & Office Boys	Southwark	4	17	9			
		Pimlico	2	6	3	1		
	Skilled Trades	Southwark	10	32	21	2		
	pained frages	Pimlico	5	- 10	9	2.		
	Apprentices \	Southwark	1	2	4			
,	Improntices	Pimlico	1	2	1	-		
1900	Clerks	Southwark	1	5	5			
to 1901.	Clerks	Pimlico	7	9	7			
1901.	Messengers	Southwark	1	18	4	_		
	Messengers	Pimlico	5	4	4	1		
	Warehouse & Office Boys	Southwark	8	10	10	-		
	Watehouse & Office Boys	Pimlico		1	_			
	Skilled Trades [	Southwark	10	24	9	_		
	Skilled Trades {	Pimlico	1	9	6	1		

<sup>\*</sup>Number of boys of whom records of height or chest were kept.

#### OCCUPATIONS OF CADETS AT DATE OF ENROLMENT-cont.

37		D:	District.			Ages.			
Year.	Occupations.	District.		14.	15.	16.	17.		
1901	Clerks	Southwark	-	-	-	_	2	2	
to 1902.	Messengers	29	-	-	-	3	11	7	
	Warehouse & Office Boys	79	-	-	-	2	8	11	
	Skilled Trades	,,,	-	-	•	5	6	12	
	Apprentices	39		•	-	1	2	ppo 1-deliti	_
1902	Clerks	Southwark	-	-		1	2	1	
to 1903.	Messengers	**	-	•		2	7	3	
	Warehouse & Office Boys	99	-	. •	-	4	10	7	
	Skilled Trades	>>	<u>.</u> .	-	-	2	21	13	
	Apprentices	,,,	•	-		_	4	5	~

Remarks.

Clerks-Sedentary occupation, indoors.

Messengers-Running about outdoors, and van boys.

Warehouse and Office includes packers and boys working partly in and partly out of doors, where skill is not required.

Skilled Trades includes "printers' devils" and machine minders, and boys learning a trade.

#### III.

#### CHELSEA DISTRICT.

The officer commanding this Company reports as follows:—

"The average height of the recruit at the age of fifteen is five feet one-and-a-half inches.

"They appear on the whole fairly well developed when they join but muscularly weak. They grow rapidly, and in the majority of cases seem underfed, or rather fed on unwholesome diet. "The boys coming from the Chelsea district appear to be of a lower class socially than those who join from districts further away, such as Fulham and Notting Hill Gate.

"It has struck me rather forcibly that no boys in this class of life have ever learnt the proper way to walk and thus tend to slouch and are consequently hollow-chested."

#### APPENDIX XXIV.

## TRANSLATION OF THE RESOLUTIONS UNANIMOUSLY ADOPTED BY THE BRUSSELS CONGRESS OF 1899.

I,

Proposed by M.M. Fourmer and Le Jeune:-

"The Conference desires to see the various Governments employ all their powers to suppress absolutely prostitution among girls under age (en état de minorité civile)."

#### Ш

Proposed by M.M. Fournier, Pavdoff, Jonathan Hutchison, Doutrelepont, Lesser, Peterson, De Sturmer, Neisser, Wolff, and Mracek:—

"The Conference considering that a profound knowledge of Venereology forms one of the best means for effectually combating the spread of venereal diseases, recommends urgently to the various Governments to provide for the education of truly competent medical practitioners by the institution in every University of complete and compulsory courses, the subject of which shall form part of the State Examinations. The Conference requests that the examiners may be specialists."

VI

Proposed by the British Medical Association and moved by Dr. Saundby:—

"The Conference requests the various Governments to constitute in each country a Commission charged: (a)

To determine the frequency of venereal diseases among the civil population apart from temporary variations. (b) To enquire into the Institutions actually in existence for the treatment of venereal diseases, the distribution of hospitals, the number of beds available in different places, and to propose the most efficacious measures for the treatment of these diseases. (c) To collect opinions as to the best means for preventing and limiting the spread of venereal diseases among the civil population and to formulate conclusions upon the subject."

#### VII.

Proposed by Professor Lassar (Berlin):-

"The various Governments are requested to seize every favourable opportunity for drawing public attention, and especially that of young persons, to the danger resulting from prostitution to the health of the young of both sexes, and to the terrible consequences of venereal diseases."

#### VIII.

Proposed by M.M. Pierson and Fiaux:-

"The Conference desires to see the venereal statistics of all countries arranged upon uniform basis."

#### APPENDIX XXV.

#### Appendix to Evidence of Dr. Most.

#### 1. THE RELATION OF SYPHILIS TO GENERAL PARALYSIS OF THE INSANE.

In the adult form of the disease, males are affected about four times as frequently as females. In the juvenile form of the disease, where the chances of inherited affection are the same, the sexes are equally affected. As we rise in the social scale, females affected with general paralysis are rare, whereas it is relatively common amongst When it does occur in the upper classes there is generally, so I am informed, a history of the husband infecting the wife. Where syphilis is unknown, so also is general paralysis. This argument, however, is not convincing, because in many countries, where syphilis is very prevalent, general paralysis and tabes dorsalis are seldom Another factor or factors are necessary, namely, those conditions of stress and excitement which tend to neurasthenia or the neuropathic or psychopathic constitution.

In 70 or 80 per cent. cases of general paralysis and taboparalysis—that is, general paralysis commencing with or being associated with locomotor ataxy—a history or signs of syphilis was found in 200 carefully reported cases.

Since I have pointed out the importance of syphilis as an etiological factor in this disease, the statistics from some of the asylums have conclusively proved and confirmed the important relationship of these two diseases. I may cite, as instances, Bexley Asylum and Hanwell.

Dr. Bolton, my late assistant at Claybury Asylum, in eighty-three carefully reported cases of general paralysis, made out 80 per cent. certain syphilis and 97 per cent. probable. His statistics included a number of private patients at Claybury Hall. It might be argued that in 20 per cent.there is no evidence of syphilitic infection, even on these statistics; but, on the other hand, Crocker has shown that in only 80 per cent. of undoubted syphilitic skin diseases can a history of syphilis be obtained. Moreover, I have found in quite 20 per cent. of certain syphilitic brain diseases no certain history can be obtained of previous syphilitic infection. One of the strongest arguments, syphilitic infection. One of the strongest arguments, however, of the syphilitic origin of general paralysis is afforded by the juverile form of the disease, of which I have collected thirty cases, most of which I examined personally during life and post mortem. In 60 per cent. there were signs of syphilis on the body; in 80 per cent. there was definite evidence of the parents having suffered with the disease; and in the remaining 20 per cent. either it was probable, or the children were illegitimate, or no history was obtainable. In seventeen of the cases, the majority of which I examined personally and interviewed the parents, I found that the families added together were made up as follows:-

16 miscarriages,

25 still born children,

11 died in infancy, 6 diseased or weaklings,

17 general paralytics,32 alive and well (offspring).

Some of those, however, said to be well, showed traces of congenital syphilis, imbecility or nervous disease.

As a proof of the cause of general paralysis being syphilis, I may here cite the experiments of Kraft-Ebbing, who inoculated nine general paralytics, who exhibited no signs of syphilis on the body, with the virus of a hard chance. Cases were watched 180 days, but showed no symptoms, proving that they were immune to infection, and that although they showed no signs on the body yet had, in all probability, previously acquired the disease.

#### II. THE RELATION OF SYPHILIS TO OPTIC ATROPHY AND LOCOMOTOR ATAXY (TABES).

In seventy cases of tabes, and seventy cases of taboparalysis, antecedent syphilis was found in 70 per cent. or 80 per cent.

In a large proportion there was optic atrophy and blindness. The proportion with antecedent syphilis

should be much higher than this, because I have included some cases in which the history was unobtainable. over, I have not included cases of gonorrhea or soft sores, which should be probable cases of syphilitic infection.

Among these 140 cases were seven of conjugal affection -husband and wife dying of either tabes, tabo-paralysis, or general paralysis; the wife dying in most cases later than the husband, as would be expected, for the wife was infected by the husband. In all these seven cases I saw one or other, or both, and in all but one case, which was probably syphilis, infection could be proved.

	Issue.					
		Born dead.	Mis- carried.			
10	11	13	31			
		4	.9			
151	75	5	2			
	alive.	Children alive but died in infancy.	Children alive but died in infancy.  Born dead.			

Dr. Bailey, of Hanwell, obtained the following results as regards families of female general paralytics:-

118 female general paralytics 102 were married women. 2 were juvenile cases. 3 certainly had cohabited. 11 were ? virgins.

The 105 women had 129 children alive; 117 children born alive, but dead=2.3 per cent. instead of 4.5 per cent. 34.5 per cent of these women were sterile.

Statistics of Spencer Wells, Simpson, Sims, and Guttstadt show that normally 10·15 per cent. of women who are married are sterile. Therefore, the sterility of female are married are sterile. Therefore, the sterility of female tabetics and paralytics is two to three times as frequent. This may be explained by the frequency with which one finds post mortem in general paralytic women nontubercular salpingitis; six to seven times as frequently as in other females dying in the asylums; this points again to venereal infection either before or after marriage. Both in tabes, tabo-paralysis, and general paralysis, signs of syphilis are found, post mortem, in rather more than 40 per cent. of the cases. In 213 male post mortems at Claybury there were eighty-six general paralytics, and 45.4 per cent. of these had some signs of syphilis on the body; of 127 remaining general paralytics 9 per cent. had some signs. In 249 female post mortems there were thirty-six general paralytics, of which 19.5 per cent. had signs on the body; 213 general paralytics remaining, only 2 per cent. had signs. In eighteen female general paralytics fourteen had non-tubercular salpingitis.

#### III.—NERVOUS DISEASES IN HOSPITAL PRACTICE.

In the first volume of the Archives of Neurology I collected from my practice at Charing Cross Hospital and the asylums sixty cases (v. Case 58, p. 161). In my hospital practice I invariably try anti-syphilitic remedies for nervous affections in men between the ages of twentyfive and fifty, even when there is no history of syphilis, sometimes with the very best results (v. Case 16, p. 60). A considerable number of these cases have been in the

#### IV .- ARTERIAL DEGENERATION.

Only in young people, the subjects of congenital syphilis, have I seen post mortem nodular fibrosis and atheromatous patches in the aorta. This I have observed in five or six of the cases of juvenile general paralysis the subjects of congenital syphilis.

We may put this fact by the side of other facts, viz.: that these children were of stunted growth, and showed in the generative organs signs of infantilism, even though they had arrived at an age considerably past puberty.

With regard to the questions of degenerative changes of the aorta as a result of syphilis acquired, the statistics of post mortems made by my assistant, Dr. Watson, at Claybury Asylum, confirms my previously recorded experiences. As degenerative changes in the large vessels are properly regarded as evidence of senile decay and physical deterioration, I shall not take into consideration those cases of death which have occurred after forty-five.

Out of a total of 176 patients who died during the last year, fifty-five—forty males, fifteen females—were general paralytics.

Of the forty males, twenty-two had signs of syphilis; eleven had probable signs.

Of the fifteen females, ten had non-tuberculous tubal disease.

Of the cases under forty-five, there were forty-one general paralytics, twenty-seven males and fourteen females.

There were thirty non-general paralytics, seventeen males, thirteen females.

Of the fourteen female general paralytics under forty-five, nine showed marked degenerative changes in the aorta—all showed some changes, and with the exception of one case, every one exhibited fibrous patches—two had certain signs of syphilis on the body, two had doubt-fun signs, and six had signs of venereal infection by old non-tubercular tubal disease.

Whereas of the seventeen female non-general paralytics three showed no arterial degeneration; eleven showed very slight degeneration; only two showed fairly marked degeneration.

Two only of the seventeen had tubal disease, and one of these exhibited marked atheroma and fibrosis of the aorta and was probably syphilitic.

Of the twenty-seven male general paralytics under forty-five, fourteen showed positive signs of syphilis, three doubtful, and ten no signs. Two suffered with aneurism, which was the immediate cause of death, in both of which there was a positive history of syphilis; with one exception all showed pearly nodular fibrosis, and in quite half the cases the degenerative changes of fibrosis and atheroma were either marked, or very marked. In no case was a degenerative case absent.

Of the thirteen non-paralytic males, three showed nodular fibrosis, but one of these certainly had syphilis, and two others doubtful signs on the body.

In three cases there were no degenerative changes at all, and the remainder only showed slight atheroma, but no fibrosis.

#### APPENDIX XXVI.

Appendix to Evidence of Dr. Wiglesworth.

TABLE I.

Showing the total number of pauper lunatics in the County of Lancaster and the proportion to population.

Year.	Popul	lation.	Total number of Lunatics on 1st January.		Number per 1,000.	
1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875	Census estimated.  "" "" Census estimated.  "" ""	2,429,440 2,468,386 2,507,332 2,546,278 2,585,224 2,624,170 2,663,110 2,702,063 2,741,012 2,779,957 2,818,904 2,882,436 2,945,968 3,009,500 3,073,032	1862 1863 1864 1865 1866 1867 1869 1870 1871 1872 1873 1874 1875	3,290 3,489 3,749 3,793 3,941 4,196 4,387 4,640 4,898 4,982 5,197 5,349 5,482 5,770 5,873	1·354 1·413 1·495 1·489 1·524 1·598 1·647 1·717 1·786 1·792 1·843 1·855 1·860 1·917 1·911	

TABLE I.—Cont.

Year.	Popul	lation.	of Lu	number inatics January.	Number per 1,000.
1876 1877 1878 1879 1880 1881 1882 1883 1884 1885	estimated.  "" "" "" "" "" "" "" "" "" "" "" "" "	3,136,564 3,200,096 3,263,628 3,327,160 3,390,692 3,454,225 3,501,170 3,548,115 3,595,060 3,642,005 3,688,950	of Lu	6,071 6,374 6,505 6,789 6,816 7,010 7,230 7,568 7,704 7,878 8,034	1·935 1·991 1·993 2·040 2·010 2·029 2·065 2·132 2·142 2·163 2·177
1887 1888 1889 1890 1891 1892 1893	" Census estimated.	3,735,895 3,782,840 3,829,785 3,876,730 3,923,676 3,971,719 4,019,762	1889 1890 1891 1892 1893 1894	8,290 8,661 8,933 8,974 9,200 9,548 9,857	2·219 2·289 2·332 2·314 2·344 2·403 2·452
1894 1895 1896 1897 1898 1899 1900 1901	Census estimated.  ,,  ,,  ,,  Census estimated.	4,067,805 4,115,848 4,163,891 4,211,934 4,259,977 4,308,021 4,356,065 4,404,109 4,452,152	1895 1896 1897 1898 1899 1900 1901 1902 1903	10,054 10,249 10,549 10,832 11,212 11,395 11,726 11,913 12,393	2·471 2·490 2·533 2·571 2·631 2·645 2·691 2·704 2·783

TABLE II.

SHOWING THE DISTRIBUTION OF THE PAUPER LUNATICS IN THE COUNTY OF LANCASTER.

Remarks,				The 4/- Government Grant per head for all	Lunatics maintained in Asylums came into operation in 1875.			Between 1882-1892 large additions were	made to the accommodation in all the four Asylums in Lancashire.	For several years preceding January 1st,	1902, there was a deficiency of Asylum Accommodation.	A new (fifth) Lancashire Asylum was opened on January 1st, 1902.	
%		44.80		43.23		54.60		73.65		70.98		76.76	
Lancashire Asylums,		1,474		2,247		3,828		6,776		8,456		9,513	
%		41.70		44.73		38.88		23.63		24.10		20.95	
Work-house.		1,372		2,325		2,726		2,179		2,872		2,597	
%		11.79		5.26		2.48		1.75		1.35		1.25	
Friends.		388		589		174		161		162	,	156	
%		1		-0.1		24.		တ္		18.		18.	
Reyal Aibart.		-		4		54		77		104		103	
%		•18	~	3.86		1.45		<del>1</del> 0.		2.61		÷1.	
Out County Asylums.		9		201		102		4		315		18	
%		1.51		2.25		1.79		.03		•03		.003	
Haydock Lodge.		20		131		126		က		4		-	
No. of Lunaties 1st January.	1862.	3,290	1872.	5,197	1882.	7,010	1892.	9,200	1902.	11,913	1903.	12,393	

# TABLE III.

COUNTY OF LANCASTER.

RETURN showing the number per thousand of the population who were chargeable lunatics on the 1st January, 1862, 1872, 1882, 1892, 1902, excluding all lunatics who, having no settlement in any Lancaster Union, were chargeable exclusively to the County or to County Boroughs.

Name of Union.		Population on Census	Vumber of Lunatics 1st January, 1862.	Number per thousand chargeable Lunatics.	Population on Census	Number of Lunatics lst January, 1872.	Number per thousand chargeable Lunatics.	Population on Census 1881,	Number of Lunaties let January, 1882.	Number per thousand chargeable Lunatics.	Population on Gensus of 1891.	Number of Lunatics lst January, 1892.	Number per thousand chargeable Lunatics.	Population on Census of 1901,	Number of Lunaties lst January, 1902.	Number per thousand chargeable Lunatics.
						i	000	000		1	100	1		000 111		
*Ashton-under-Lyne -		82,305	 86	1.190	82,922	171	790.7	99,250	203 203	2.549	51,719	022	1.953	111,683	102	1.799
Barrow-in-Furness Barton on Irwell		39 033	- G.	1.793	51.563		1.221	72.825	2,52	1.002	93,501	157	1.679	114.773	229	1.995
Blackburn		119,942	79	.658	143,808	180	1.251	175,948	281	1.597	204,903	363	1.771	223.520	280	2.594
Bolton	•	130,269	167	1.281	158,402	277	1.748	192,413	361	1.876	226,803	488	2.151	257,587	715	2.775
Burnley		75,595	92	1.217	87,475	164	1.874	118,391	210	1.773	165,289	347	2.099	196,541	469	2.386
Bury		101,135	179	1.030	109,133	201	1.041	129,049	203	2.0.2	107,400	010	002.2	140,008	202	2.493
Charley		41 678	73	1.751	43.004	- 65	2.139	47.726	114	2.388	55,058	104	1.888	63,001	122	1.936
Chorlton -		169,579	128	-754	211.357	354	1.674	260,257	520	1-997	209,855	766	2.554	342,643	086	2.860
‡Clitheroe	•	14,081	28	1.988	15,087	080	1.988	17,668	47	5.660	17,916	39	2.176	18,140	36	1.984
Fylde, The	•	25,682	36	1.401	30,641	20	1.631	40,908	42	1.026	56,299	82 6	1.030	93,697	121	1.201
Garstang -		12,425	oc i	.643	12,186	1.1001	1.895	12,375	18.	1.404	12,151	17.4	1.600	11,860	777	008.T
Hasingden		69,781	9/	aso. I	19.0	190	070.1	193	101	800. T	109,409	1/4	700.1	622,611	+22	##6.T
Tangaster		94 004	35	1.333	32.683	42	1.285	40.842	45	101-1	52.024	65	1.249	67.385	130	1-929
Leigh		37,700	000 0000 0000	1.007	41,915	47	1-121	56,315	99	1.171	70,756	102	1.441	86,254	150	1.739
Liverpool		239,742	573	2.124	238,353	761	3.192	210,161	773	3.678	156,991	764	4.866	147,405	884	5.997
Lunesdale			1	1	6,978	16	2.292	7,132	14	1.962	7,347	∞ 1 2	2.450	6,948	25	3.598
Manchester		185,410	407	2.195	173,965	592	3.402	148,805	578	3.884	145,083	578	3.983	132,316	567	4.285
Oldham Ormelring		111,276	137	1.731	50,969	73	1.930	83 170	96	1.050	601,102	137	1.380	108 594	150	2.052
Prescot		73 197	) 67 H 00	1.135	92.538	156	1.685	117.939	225	1.907	140,927	328	2.327	153,648	411	2.674
Preston - :	•	110,523	116	1.049	115,848	233	2.011	129,155	313	2.423	143,541	398	2.772	152,231	428	2.811
Prestwich		58,578	65	1.058	77,948	66	1.270	119,218	152	1.274	149,537	258	1.725	196,832	324	1.646
Rochdale	•	91,754	137	1.493	109,829	213	1.939	121,910	264	2.165	123,910	337	2.719	120,433	364	3.022
*Saliord		105,335	147	1.385	128,894	231	1.792	181,525	999 99	C48.T	204,022	280	2.845	229,450	101	3.129
Todmorden		0.146	- B	.67.6	010,01	10	1.085	9.036	3 =	1.190	10,00	3	001 7	007,00	101	2 000
Toxteth Park		69.284	74	1.068	85.811	145	1.689	117,028	215	1.837	128,387	317	2.469	156,230	484	3.552
Ulverston	•	35,733	63	1.762	55,032	80	1.617	43,685	105	2.403	43,821	96	2.190	42,733	140	3.271
Warrington		39,821	89	1.707	50,064	7.5	1.438	64,655	119	1.840	82,725	150	1.813	100,001	195	1.949
West Derby		156,561	140	-894	257,039	313	1.217	359,114	793	2.208	444,365	1,166	2.623	529,684	1,666	3.145
Wigan		94,561	115	1.216	111,947	184	1.643	139,867	536	1.687	166,762	312	1.870	191,239	403	2.107
Townships not in Unions -	•	2,110	1	1				]	ı		]	1		1	ì	ſ
																The second secon
Total chargeable to Unions	•	2,429,440	3,290	1.354	2,818,904	5,197	1.843	3,454,225	7,010	2.029	3,923,676	9,200	2.344 4	4,404,109	11,913	2.704
* These Unions are northy in Checkine but only the Lancachine nortions are have included	o jud onic	olv the Lance	Janua por	ione and	open included	7	+ This I	Thion is now in Lunesdale	in Lunes	dale			•			
Lucia Ciniona aro paruly in Chicas	He, pur o	III the Pance	astire por	roms are r	icle morana	J.	THIS	MOII OI HOIH	III TANIES	danc.						d

<sup>‡</sup> This Union is partly in Yorkshire, but only the Lancashire portion is here included.

§ This Union is now in Westmorland.

93

|| This Union is now in Yorkshire.

94 APPENDIX:

TABLE IV.

SHOWING THE INCIDENCE OF INSANITY IN THE DIFFERENT UNIONS IN THE COUNTY OF LANCASTER, ARRANGED ACCORDING TO DEGREE.

Unions in which the number of Lunatics per thousand of the population is 2 or less, calculated on the Census of 1901.

Name of Union.	Population in 1891.	Population in 1901.	Increase.	Decrease.	No. of Lunatics per 1,000, 1891.	No. of Lunatics per 1,000, 1901.	Increase.	Decrease.
Ashton-under-Lyne	107,825	111,683	3,858	_	2.040	1.799	- *	•241
Barrow-in-Furness	51,712	57,586	5,874	_	1.353	1.736	•383	_
Barton-on Irwell -	93,501	114,773	21,272		1.679	1.995	•316	-
Chorley	55,058	63,001	7,943		1.888	1.936	•048	-
Clitheroe	17,916	18,140	224		2.176	1.984		192
Fylde, The	56,299	93,697	37,398	_	1.030	1.291	•261	-
Garstang	12,151	11,860		291	1.563	1.855	•292	_
Haslingden	103,408	115,223	11,815	_	1.682	1.944	•262	_
Lancaster	52,024	67,385	15,361		1.249	1.929	•680	_
Leigh · · ·	70,756	86,254	15,498		1.441	1.739	-298	-
Ormskirk	99,207	108,594	9,387		1.380	1.740	•360	_
Prestwich	149,537	196,832	47,295	_	1.725	1.646	_	.079
Warrington	82,725	100,012	17,287		1.813	1.949	•133	_

Unions in which the number of Lunatics per thousand of the population is above 2 and not exceeding 3, calculated on the Census of 1901.

Name of Union	•	Population in 1891.	Population in 1901.	Increase.	Decrease.	No. of Lunatics per 1,000, 1891.	No. of Lunatics per 1,000, 1901.	Increase.	Decrease.
Blackburn -	-	204,903	223,520	18,617		1.771	2.594	·823	
Bolton	-	226,803	257,587	30,784		2.151	2.775	•624	
Burnley -	-	165,289	196,541	31,252	_	2.099	2.386	•287	
Bury	•	137,405	145,569	8,164	-	2.256	2.493	237	
Chorlton -	-	299,855	342,643	42,788	_	2.554	2.860	•306	
Oldham -	-	201,153	215,624	14,471	_	2.048	2.652	•604	_
Prescot		140,927	153,648	12,721	-	2.327	2.674	•347	_
Preston	-	143,541	152,231	8,690		2.772	2.811	-039	_
Stockport -	٠	30,376	35,208	4,832	_	2.139	2.868	•729	_
Wigan	•	166,762	191,239	24,477	dimensis	1.870	2.107	•230	

Unions in which the number of Lunatics per thousand of the population is above 3 and not exceeding 4, calculated on the Census of 190%.

Name of Union.	Population in 1891.	Population in 1901.	Increase.	Decrease.	No. of Lunatics per 1,000, 1891.	No. of Lunatics per 1,000, 1901.	Increase.	Decrease.
Limesdale	7,347	6,948		399	2.450	3.598	1.148	
Rochdale	123,910	120,433		3,477	2.719	3.022	.303	
Salford	204,522	229,450	24,928	_	2.845	3.129	•284	_
Toxteth Park -	128,387	136,230	7,843		2.469	3.552	1.083	_
Ulverston	43,821	42,793		1,028	2.190	3.271	1.081	
West Derby	444,365	529,684	85,319	_	2.623	3.145	•522	

Unions in which the number of Lunatics per thousand of the population is above 4, calculated on the Census of 1901.

Name of Union.	Population in 1891.	Population in 1901.	Increase.	Decrease.	No. of Lunatics per 1,000, 1891.	No. of Lunatics per 1,000, 1£01.	Increase.	Decrease.
Liverpool	[156,991	147,405	_	9,586	4.866	5.997	1.131	
Manchester	145,083	132,316	_	12,767	3.983	4.285	•302	_

#### TABLE V.

SHOWING THE INCIDENCE OF INSANITY IN THE DIFFERENT UNIONS OF THE COUNTY OF LANCASTER, ARRANGED ACCORDING TO DENSITY OF POPULATION.

Unions in which the Population Aggregated in any one Town does not exceed 50,000.

<sup>§</sup> Name of Union.	·
Ashton-under-Lyne	Mainly urban, but with considerable rural district. Chief industries: cotton factories iron works, hat mills, and coal mines, especially the first named, in which womer are largely employed; factories furnish the chief employment even in the rura district.
Barton-on-Irwell	Largely urban and residential with a distinct rural element.
Chorley	Largely rural but with considerable industrial element in the shape of cotton manufacture, etc.
Clitheroe	Almost entirely rural and agricultural, but cotton mills in the borough of Clitheroe and a few villages.
The Fylde	Most of the population is at seaside health resorts, where no industries are carried on, the remainder is entirely rural and exclusively agricultural, with the exception of a few cotton mills.
Garstang Haslingden	This is purely rural and the population almost entirely employed in agriculture.  Mainly urban but with a large rural district. Leading industries: cotton factories, felt and slipper manufacturing and engineering; rural population largely employed in cotton mills. Women largely employed.
Lancaster	Mainly urban but with considerable rural element; the rural parishes are almost entirely agricultural. Chief industries: table baize and linoleum, cotton manufacture, furniture making, wagon building, and ironworks. Women and children employed in factories.
Leigh	Mainly urban but with a moderately rural element. Leading industries: coal mining and cotton factories; women largely employed in the latter.
Lunesdale	Solely rural and mainly agricultural. Table baize and cotton factories employ about 7 per cent. of the population.
Ormskirk	Rather more than one-half of the population is comprised in the seaside health resorts of Southport and Birkdale; rural population mainly agricultural; there is one small mining town; population, 5,700.
Stockport	Exclusively urban, mainly industrial, but partly residential. Chief industries: cotton spinning and weaving, engineering trades, and hat manufacturing. Women largely employed in cotton mills and hat manufactures. The major portion of this Union is in Cheshire, and were it not for the artificial division of the Union, partly in Lancashire and partly in Cheshire, the aggregate population would transfer it into
Ulverston	the succeeding column of population over 50,000.  Mainly rural and agricultural. Leading occupations: iron mining and iron working, grouped chiefly at Ulverston and Dalton-in-Furness.

Unions in which the Population Aggregated in any one Town is between 50,000 and 100,000.

Name of Union.	
Barrow-in-Furness	Mainly urban but with small rural element in which the population is almost entirely
	employed in agriculture and fishing. Leading industries: shipbuilding and iron and steel works; there are a few factories.
Burnley	Mainly urban and industrial but with considerable infusion of rural population, which
	however is engaged more in industrial occupation than in agriculture. Leading industries: cotton weaving, loom making, general engineering works, and coal mines.
n .	especially cotton weaving and textile fabrics. Women and children largely employed
Bury	Mainly urban but with a large rural district. Chief industries: cotton spinning and weaving, iron works, textile machine makers, woollen, paper, bleach works, and
	calico printing. In nearly all the rural portions there are large works, either bleach
Prescot	ing, woollen, or cotton. Women largely engaged in woollen and cotton factories.  Mainly urban and industrial but with considerable rural element. Rural population
	chiefly agricultural and residential, with a few coal mines and copper manufactories Leading industries: coal mining, glass and bottle manufacturing, chemical and soap
	manufacture, copper manufacture, iron foundries, brickmaking, watchmaking, and
	electric cable manufacture. No mills, and women not largely employed, such as are are chiefly in glass works and watchmaking.
Rochdale	Almost entirely urban and industrial. Leading industries: cotton, woollen, engineer
	ing, and machine making. Women largely employed. A great centre of the cottor manufacture. The Union has been somewhat reduced in size during the last decade
	which accounts for a decrease in population.
Warrington	Mainly urban, contains also a large rural district, which is mainly but not wholly agricultural. Leading industries: iron works, wire works, soap works, wagon works
	engine works, collieries, cotton factory, fustian cutting, paper works, breweries
	and tanneries. Women and children largely employed in cotton factories and fustian cutting.
Wigan	Largely urban and industrial but with considerable rural element. Chief industries coal mining and cotton manufacture.
	coar mining and cotton manuacome.
Unione in	which the Population Aggregated in any one Town exceeds 100,000.
	The Topastion Hygregate in any one Town Execuse 100,000.
Name of Union.	
	<u> </u>
Blackturn	Mainly urban but with a fair rural infusion. A large cotton-spinning district, which
	is the leading industry. Women very largely employed.
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#### APPENDIX XXVII.

#### SUMMARY OF REPORTS FROM SUPERINTENDENTS OF LUNATIC ASYLUMS.

The Lunacy Commissioners sent a circular letter in December, 1903, to the medical superintendents of all the county and borough asylums in England and Wales, asking for any physical statistics, information, or suggestions as to the lines on which steps to collect such statistics and information should be conducted. Nearly all sent replies, most of them of an inconclusive character. Those which appeared to be useful were forwarded by the Home Office for the use of the Physical Deterioration Committee, and a summary of them here follows.

#### I. COUNTY ASYLUMS.

#### Brecon and Radnor Asylum, Talgarth.

Dr. Ernest Jones suggested inquiry into the condition of families where the mothers have worked in factories from early youth; such women rarely bear healthy children; domestic work and cookery almost unknown to them; in rural districts all the best men and women go to the towns, and leave the mentally dull to marry and intermarry and "breed dullards and imbeciles worse than themselves.

#### Cumberland and Westmorland Asylum, Carlisle.

Dr. W. F. Farquharson had no definite statistics, but said it was obvious that of late years the cases admitted had been of a much more unfavourable nature than formerly; the number of pauper patients had been gradually rising for many years; gave table showing average number of pauper patients in each county; the number of lunatics in the workhouses also shows an increase; the larger industrial centres show the greater increase the increase cannot be accounted for more by increase; the increase cannot be accounted for merely by the fact that the population is growing.

Percentage of cases caused by drink has diminished from 20.3 in 1900 to 12.3 in 1903.

#### Derby County Asylum, Mickleover, Derby.

Dr. Richard Legge had no statistics. Degeneration of dwellers in large towns only temporary, and would disdwellers in large towns only temporary, and would disappear in a generation if surroundings were equalised. Standard of health of patients not so good as twenty years ago, but this probably due to greater number of colliery and factory hands. Acute mania now less common; obscurer forms of nervous disease now more common. Deterioration of the race would require centuries to become noticeable, and no materials for trustworthy conclusions exist; still symptoms may appear; the changed views of sexual morality now common, the want of odium attaching to the production common, the want of odium attaching to the production of abortion, and the tolerance of the idea of using checks to conception, may be such symptoms.

#### Dorset County Asylum, near Dorchester.

Dr. P. W. Macdonald said there had been an increase of late years of patients under twenty-three. Degeneration largely due to the emigration from the county of the most fit—as many as 10,000 during the last decade—and the "marrying and breeding like rabbits" of those

Conducted an inquiry in regard to the large number of young soldiers among the admissions since the outbreak of the Transvaal War. Found this not due to strain on active service, but to the "parental stock or raw material being sapped with hereditary predisposition to one or other of the various phases of nervous and mental disease."

There should be a careful review of the increase of premature dementia among admissions to the asylum during the last ten years.

#### Durham County Asylum,

Dr. W. St. J. Skeen sent average heights and weights of 100 men admitted in 1883 and 1903 respectively, as follows :-

Year 1883, average height per man, 5 ft. 53 in. Year 1903, average height per man, 5 ft.  $5\frac{1}{4}$  in.

Year 1903, average weight per man, 9 st.  $2\frac{1}{2}$  lbs.

Year 1883, average weight per man, 9 st.  $1\frac{1}{4}$  lbs.

The decrease of half inch in height in twenty years appears considerable, but then the weight has gone up. It would tend to show that height and weight are not necessarily correlative.

He also sent similar measurements for women, but for 1903 only.

#### Glamorgan County Asylum, Bridgend.

Dr. H. T. Pringle sent paper by his colleague, Dr. R. S. Stewart, on the relation between wages, intemperance, and crime in South Wales. This paper, accompanied by an illustrative diagram, shows that lunacy increases with the rise of wages and the greater spending power of the operative class; a falling wage-rate is associated with a decrease of drunkenness, crime, and lunacy.

In Glamorganshire there is no real upward progress, but the reverse. The raising of the standard of material comfort, accompanied as it is by great "unwisdom, productive of the most detrimental consequences." people perish for lack of knowledge."

#### Joint Counties Asylum, Carmarthen.

Dr. Edwin Goodall suggested anthropometric comparison of large numbers of the population with an average standard, obtained by dividing the country into districts; the standard would differ for each district; has been working at a scheme of anthropometric examination, and has begun taking measurements; has by those means proved a man who had undergone imprisonment to have been a physical defective,

#### Lancaster County Asylum, Whittingham, Preston.

Dr. James F. Gemmel did not attach any great value to any measurements of the cranium which might be undertaken by an Anthropometric Survey. He called attention to the lack of statistics, but stated his opinion that physical deterioration was in progress.

Out of 1,100 admissions to the Asylum in the past two years, "fifty-five were admitted in all stages of pulmonary tuberculosis, 101 were ascertained to have a family history of tuberculosis, and 232 were admitted with well marked organic disease of the heart." Proceeding to a detailed discussion of the measures which have recently been adopted against tuberculosis, he pointed out that these do not at present greatly mitigate the attacks of the disease on the poorest classes.

He also stated his belief that boiled or sterilised milk is scorbutic in its tendency, and is not so good for babies as cow's milk.

Further he suggested the recording of statistics on the

following points:

(1) The number of cases of general paralysis, syphilitic insanity, and other luetic diseases of the nervous system in countries in which Contagious Diseases Acts are enforced, as compared with the number of cases in this country.

(2) The frequency of these affections of the nervous system among soldiers and sailors, a class prone to

contract lues.

(3) The physical condition of patients on admission into asylums, together with an annual return of the principal diseases noted.

#### Leicestershire and Rutland Asylum.

Dr. Rothsay C. Stewart had no statistics, but would suggest as subjects for inquiry :-

(1) Mode of feeding the young.

(2) Age of marriage, i.e., before individual is properly developed.

(3) Occupations of female sex.

#### North Wales Counties Lunatic Asylum, Denbigh.

Dr. L. F. Cox said that an examination of the statistics of this Institution did not indicate any remarkable or exceptional deterioration; in 1903 there were several deaths over eighty, none in 1875; cases of general paralysis about the same in number; causes of insanity much the same.

Three Counties Asylum, near Hitchin.

Dr. J. E. de Lisle had no statistics; thought there was a tendency to degeneration from the inter-marriage of near relatives of weak mind, of epileptics, of consumptives, and of chronic alcoholics; suggested "legislation and segregation.

Wilts County Asylum, Devizes.

Dr. J. Ireland Bowes said that "physical degeneracy has been a growing cause of insanity" in cases admitted. By this he appears to mean that there is an increasingly high percentage of insanity due to bodily disease; this is partly due to the fact that there has been much intermarrying in the past in Wiltshire.

The best people leave the county, while the mentally

and physically deficient remain.

Had no statistics, but suggested the submission of a series of questions as to statistics to superintendents of asylums.

II. LONDON COUNTY ASYLUMS.

Claybury Asylum.

Dr. Robert Jones sent a paper on "The Development of Insanity in regard to Civilisation," read before the British Medical Association in 1903. This paper is deeply interesting, and the author contends that physical degeneration is in progress, in spite of hygienic improvements; he mentions, among many other points, the pressing necessity of dealing with the ravages of syphilis.

Colney Hatch.

Dr. W. J. Seward's experience covers more than twentysix years, during which some 17,000 patients have been under his treatment. He referred especially to three

1. Alcoholic Excess—this covers 20 per cent. of the cases; he advocates that instruction "as to the evils (mental, moral, and physical) resulting from intemperance should be made compulsory in all elementary

2. Syphilis.

3. Density of population and its attendant evils; he sent figures showing a close correspondence between the proportion of pauper lunacy and the density of population in the various London districts.

Epileptic Colony, Ewell, Surrey.

Dr. C. Hubert Bond regretted the lack of statistics; advocates a uniform form of case-taking in asylums

throughout the country, and the collecting of family histories in a systematic manner.

Still more important would be "a well thought out scheme of anthropological examination of children attending Board Schools"; to this should be added an inquiry into the personal and family history of the parents of children who showed any marked departure from the normal.

#### III. COUNTY BOROUGH ASYLUMS.

Croydon Mental Hospital, Warlingham, Surrey.

Dr. E. S. Pasmore thought degeneracy was due to—

Drink—25 per cent.
 Too early marriages.

Marriages of convenience.
 Too long hours of work.

5. Marriages of people who have been insane.

Too frequent use of prepared foods.

7. Over-education in schools of subjects which are of no use, to the neglect of cookery, needlework, etc.

8. Scanty underclothing.9. Defective methods of heating houses.

10. Emigration of the strong to the colonies 11. Low rate of wages in country districts.

12. Prevalence of venereal diseases—80 per cent. of locomotor ataxy and general paralysis is due to syphilis.

Suggested-

Legislation aimed at the following:-

. Suppression of drink by closing public houses on Sunday; prohibiting confirmed drunkards (or any one suffering from a fatal malady) to marry; less hours of work, but no half-holidays.

2. Suppression of contagious diseases.

3. Institution in all schools of classes of cookery

4. Establishment of educational crêches, etc.

Middlesborough Asylum.

Dr. G. Stevens Tape sent a complete list of all admissions from March, 1898, to December, 1903, with ages, height, and weight.

(He gave the admissions in order of date, but did not specify the exact date, or even the year; and he did not distinguish male from female; so that it was impossible to draw any reliable conclusions for purposes of comparison.)

#### APPENDIX XXVIII.

#### A BRIEF STATEMENT OF THE RESULTS OBTAINED BY A COMMITTEE OF THE BRITISH DENTAL ASSOCIATION APPOINTED TO INVESTIGATE THE CONDITION OF THE TEETH OF SCHOOL CHILDREN.

The examination of the teeth of school children in a number of schools (mainly Reformatories, Industrial-Schools, Training Ships, Orphanages, National and Board Schools, and the like) throughout the country was conducted by dental practitioners approved by the Committee of the British Dental Association, in order to obtain statistics for the following purposes:-

1. To acquire a more exact knowledge of the condition of children's teeth at various ages

2. To show, by means of the facts thus acquired, the disabilities under which children frequently suffer in their growth and development, and the important bearing of those disabilities upon the future health of the individual.

The following table is a brief summary of the results of the examination, and contains merely those figures which are of the greatest importance :-

TABLE showing the results of an examination of the mouths of 10,517 boys and girls in English and Scotch schools, with an average age of about twelve years :-

Number of children examined 10,517 Temporary teeth requiring filling 9,573) 18,009 Temporary teeth requiring extraction 8,436 Permanent teeth requiring filling 13.017 19,096 Permanent teeth requiring extraction 6,079

Total unsound teeth 37,105 Teeth already extracted 2.174

Sets of teeth free from decay --1,508 = 14.2 per cent.

It is important to note that this statistical information was derived, not from the ordinary practice of dental surgeons or special hospitals, but from the inspection of industrial schools, training ships, and other scholastic institutions, and may thus be taken as typical of the condition of the teeth of the poorer classes both in England and Scotland, since the healthy teeth and mouths have been as carefully tabulated as the unhealthy.

An excellent comparison was afforded by two Edinburgh schools with a sufficiently large number of pupils, where the examinations were made by the same examiner: the children were all well fed and lived under perfectly sanitary conditions, and the average age in each school was exactly the same, viz., eleven and a half years. It was found that the ratio of defective permanent teeth per 1,000 children was 158.2 in the school for the children of well-to-do working people, and 273.9 in that for the children of a better class, professional men and merchants. This striking contrast was intensified by comparing the relative numbers of sets of teeth free from decay, viz., 11 per cent. in the poorer and 7.5 per cent. in the richer class school.

A fact which merits careful consideration is that out of the 10,517 children's mouths inspected, there were only about 1,508 which required neither fillings nor extractions, a little over 14 per cent., and that in all the others some condition existed which necessitated special attention, in order to procure, as nearly as is possible, a healthy

In the returns when all the teeth are free from decay and even if irregular, the denture is taken as good; if only one to four teeth are decayed or lost, as fair; if five to eight, bad; and if more than eight, very bad.

By grouping three yearly returns from seven onwards together as in Table B, in parallel columns, the early age

at which decay begins, the rapid increase from bad to worse in the decayed sets with each year of life, and the inevitable fate of such sets in the course of years, unless controlled by treatment during childhood, are proved to almost mathematical demonstration.

Table B. Showing the relative ratio per hundred children [having sound teeth, defective temporary teeth, and defective permanent teeth, classified quarternarily, arranged in triennial age periods

Age Period.	ivvi.	viiix.	xxii.	xiiixv.	xvixviii.	Quality.
No. Examined.	744	1,716	3,071	2,376	268	8,175
Sound (no decay)	23.8	14.2	16.1	14·1	6.4	Good
Defective Temporary Teeth only	67:4	43.3	18.3	5.1	0.1	Uncertain
Defective Permanent Teeth						
1-4	8.8	41.5	55.9	51.9	37.3	Fair
5—8		1.9	8.5	22.9	32.6	Bad
9 or more	-		1.2	6	23.6	Very Bad
	100	100	100	100	100	

The rise in the ratio of sound dentures until the third period is fully accounted for by the eruption of good permanent teeth in place of, for the most part, decaying temporary teeth, and perhaps by the fact that precocious development is not infrequently attended by exceptional susceptibility to decay. The rapid diminution of cases presenting only defective temporary, is only what might have been expected except in so far as they persist into the third and fourth age groups. The schools influenced in this tabulation comprised two very distinct categories, the poor not yet receiving dental treatment, and the rich with dental officers attached. The undue retention of these temporary teeth only occurred in the former class.

The rise and fall of the ratios in the fair class, the abrupt increase of those in the "bad" during the third, followed by the serious transition from bad to very bad during the fourth age period, is more than instructive, and demonstrates the urgency of treatment in the first and

second age periods.

In 931 cases (Feltham, Shibden, Walsall) only about 13 per cent. were returned as clean, and 42 per cent. as fairly clean, while 42 per cent. were classified as dirty, and about 3 per cent. as foul. The presence of tartar was registered as little in over 43 per cent., and much in over 9 per cent. of the mouths examined.

> (Signed) W. H. DOLAMORE. Hon. Sec. B.D.A.

REPORT DATED 8TH FEBRUARY, 1904, OF THE HYGIENE COMMITTEE OF THE BRITISH DENTAL ASSOCIATION ON THE ALLEGED INCREASE OF DENTAL CARIES.

The Committee, in submitting the present Report as to the alleged increase of dental caries, beg to point out that after an exhaustive search, no comparative statistics as to the prevalence of dental caries have been found, and they are of opinion that none exist.

Failing the exact proof which statistics alone can give, they beg to present the following evidence for whatever

value it may possess.

A circular letter was addressed to certain dental practitioners who were able to speak from an experience extending over fifty years. All agreed that dental caries had increased, though some considered it had not increased to the alarming extent frequently alleged. The Committee have examined the collection of British skulls in the Museum of the Royal College of Surgeons of England. Dental caries, in skulls of ancient date, was almost

entirely absent, and, where present, it was trifling in extent. Skulls of modern date showed evidence of dental caries to a considerable extent.

The researches of Mummery, Cartwright, Coleman, and Sir B. W. Richardson, recorded in the transactions of the Odontological Society of Great Britain, show that the teeth of early British skulls correspond in character to those referred to in the above mentioned collection.

An examination was made of 181 jaws at University College, London, exhumed at Whitechapel, presumably from one of the plague pits (circa 1665.) These, despite the number of teeth missing, showed that dental caries was more prevalent than in early British skulls, although not nearly to the extent common at the present day.

With respect to dental caries at the present time the Committee beg to present the following facts:-

More than 3,000 men were invalided home during the Boer War on account of defective teeth. This, however, did not fully represent the extent of dental disease, as the Government sent out several dentists to attend to the troops in the fields, besides employing the services of many local dentists for those at the base.

Hospital statistics show that a largely increasing number of patients require to be referred to the dental departments. There is also a largely increasing number of patients suffering from diseases of the stomach and from other indirect affections due to bad teeth, who require dental treatment.

The Royal College of Surgeons of England in their preliminary report to the Home Secretary points out that rejection of recruits due to bad teeth has increased nearly five-fold in the twelve years, 1891 to 1902.

Statistics have already been supplied to the Privy Council showing that dental caries occurs in the teeth of school children to the extent of at least 86 per cent.

The public press publishes numerous letters from laymen bearing testimony to the prevalence of dental caries.

If further evidence, or more definite statistics, of the increase of dental caries are required, the Committee beg to recommend that Government should undertake the conduct of an inquiry. The Committee, in addition, desire to strongly emphasise the importance of instructing the children of the public elementary schools, in the value and care of their teeth.

Signed on behalf of the Hygiene Committee of the British Dental Association.

> Wm. RUSHTON. Hon. Secretary.

III.

# REPORT OF THE WAR OFFICE AND ADMIRALTY INTER-DEPARTMENTAL CONFERENCE ON THE TEETH OF RECRUITS, DATED AUGUST 25TH, 1903.

The proposal to have a joint conference between representatives of the Admiralty and the War Office on the subject of the relatively large proportion of recruits for both Navy and Army who have to be rejected on account of the defective state of their teeth, arose out of a reply given in the House of Commons by Sir W. Anson, in answer to a question asked by Mr. Weir, that a large percentage of men were rejected as recruits for the Navy on account of bad teeth, while the Secretary of State for War had also been for some time attracted to the prominent position occupied in recent recruiting statistics for the Army by rejections for this cause.

It was pointed out that the Board of Education are considering the propriety of communicating with local authorities on the subject.

Mr. Brodrick offered to associate himself with Lord Selborne in making a joint representation to the Board of Education, with a view to steps being taken by that Department to check if possible the evil complained of, and to arrest the deterioration of physique among the working classes from which the recruits for both branches of the service are drawn. It was therefore agreed, before any representation on the subject was made to the Board of Education, that Admiralty and War Office representatives should consider the question with the object of reporting as to any steps which may be desirable to take in the matter.

Colonel G. T. Onslow, C.B., Inspector of Marine Recruiting, and Fleet Surgeon T. E. H. Williams, R.N., attached to the Admiralty Recruiting Department in London, were the Admiralty representatives, and Major-General H. C. Borrett, C.B., Inspector-general of Recruiting, and Major T. McCulloch, D.A.D.G., Army Medical Service, represented the War Office.

The meeting was held on the 20th July, and after discussing the general question it was decided to report as follows:—

Examination of the recruiting statistics for the Army for the years 1891 to 1902, shows a progressive increase in the numbers of men rejected for loss or decay of teeth from 10·88 per 1,000 in 1891 to 49·26 per 1,000 in 1902, Rejections for defective teeth had risen to twenty-six per 1,000 by 1898, and the figures remained fairly steady for the next four years; then a very large increase is shown for 1902, when about 5 per cent. of the men examined were rejected for bad teeth.

The only statistics available relating to Naval recruiting are those obtained for a period of one year, 1st January to 31st December 1902, from the Admiralty recruiting districts under recruiting staff officers, Royal Marines, dealing with about four-fifths of the total Naval recruiting.

These statistics show about 10 per cent. rejections for defective teeth by medical officers, but do not include rejections by recruiters.

The standard requirements in regard to soundness of teeth is probably higher for the Navy than for the Army.

The recruit for the Navy under 17 years of age is rejected if he has more than seven, or above 17 years ten teeth deficient or decayed, and both classes must possess some opposing molars and incisors.

There is no given number laid down as a guide to the acceptance or a rejection of a recruit for the Army, the rule being that acceptance or rejection will depend more upon the consideration of the relative position of the teeth which are no longer affected. And further, the loss of many teeth in a man of indifferent constitution would point to rejection, while a thoroughly robust recruit who has lost an equal number might be accepted.

The causation of a large prevalence of a defective state of teeth, among the classes whence recruits are mainly drawn, is a complex and difficult problem. It obviously bears a close relation to their general physical condition, a matter which is at present engaging much attention, and in connection with which a comprehensive enquiry has been proposed. But this much is certain, that deterioration of teeth is intimately connected with a variety of intricate causes affecting the general health of the

There seems to be some divergence of opinion as to what the chief factors leading to early decay of teeth really are.

On the one hand, it is stated all are agreed that the great cause of decay of the teeth is improper or insufficient nutrition during infancy and childhood. That the development and growth of the teeth suffer in proportion to the general malnutrition of the body resulting from defective feeding, which may be on account of ignorance on the part of the mothers, food adulteration, or actual inability of the parents to provide proper food. Some observers hold that formerly the children of the agricultural classes, from which recruits for both services were then largely drawn, were nursed by their mothers during infancy and were fed during childhood to a large extent on brown bread and good milk, and that throughout the period of dentition a diet was assimilated which favoured the production of good teeth and bone generally.

With the influx of the population in recent years to urban and suburban life, fewer mothers in all classes of life nurse their own children during infancy, while during childhood the children of the poor are fed to a great degree on watered milk and patent foods from which the husk has been removed.

Apart from this feeding having a poorer nutritive value, less mastication is required and possibly the development of teeth and jaws suffer from being less used. However that may be, we have no exact evidence as to the greater frequency of dental caries in the case of children who have been fed on artificial foods as infants, as compared with infants naturally fed. There can be little doubt that dietetic errors, poverty with insufficient food, inherited disease, and the unhealthy environment which poverty also usually entails, e.g., defective housing, overcrowding and insanitary surroundings, must all be factors powerfully influencing the growth of the body, and actively antagonistic to healthy physical development of all its tissues and organs.

On the other hand, while we must give due weight to the point that soundness of teeth is most to be looked for as an accompaniment of health and vigour, the consensus of opinion amongst the latest authorities on the teeth is distinctly in favour of the view that decay of the teeth is the result of local influences, and that malnutrition plays but a very small part in the production of dental caries, as compared with the more common use of articles of food which readily undergo acid fermentation, and that it is neglect to keep the mouth clean that is chiefly responsible for the decay of teeth.

The Committee hold the latter view and consider the want of cleanliness is the chief cause of dental caries.

We are of opinion that no sufficiently comprehensive data are available which would enable us to compute the degree of dental deterioration existing at the present day. We believe such, however, to have increased.

We consider that the increase in the number of rejections among recruits for the Army during the last few years may be due in some measure to the greater attention now paid by recruiting medical officers to the condition of the teeth when examining candidates for the service than was formerly the case.

The importance of the care of teeth and of systematic cleansing should be impressed on all men serving.

We recommend that any representation which may be made to the Board of Education on the subject should press the following points:—

- 1. That the teaching of the elements of hygiene should be made compulsory in schools, and in this teaching the care of the teeth should receive special attention.
- 2. That daily cleansing of the teeth should be enforced by parents and teachers.

  3. That systematic examination of the teeth of
- 3. That systematic examination of the teeth of children by competent dentists, employed by school authorities should be practised where possible, to prevent caries extending, to stop carious teeth, and to remedy defects of the teeth.

A knowledge of the laws of health and the elements of sanitation should be spread abroad amongst the working classes by special lectures and by distribution of leaflets and pamphlets. Here, again, the care of the teeth should be an important part of the instruction. We notice with pleasure that Westminster is setting an example of this kind. Lastly, local authorities should enforce strongly the laws dealing with the adulteration of food, and especially should exercise a strict supervision over milk supplies.

The Committee have not gone into the question of the employment of dentists in the Army and Navy, nor of the provision of dentures for enlisted men, as they considered that these points were outside the scope of their reference.

#### APPENDIX XXIX.

# CORRESPONDENCE BETWEEN THE NATIONAL ANTI-VACCINATION LEAGUE AND THE PHYSICAL DETERIORATION COMMITTEE.

The National Anti-Vaccination League,
50, Parliament Street,
London, S.W.

15th September, 1903.

Almeric Fitz Roy, Esq., C.V.O.

SIR,—In view of the appointment of a Departmental Committee to deal with the subject of Physical Degeneration, I am desired by the Council of this League to respectfully and earnestly ask that the enclosed memorial may receive consideration.

The Council venture to think that the grounds set forth in this Memorial make out a case for inquiry as to the effect vaccination has had upon the national health.

The Council therefore will be obliged by your bringing this matter forward, and I await the favour of your kind reply.—I am, sir, your obedient servant,

CHARLES GANE,

Hon. Secretary.

(Enclosure.)

Physical Deterioration.

In view of the preliminary inquiry about to be conducted into allegations that have been made concerning the physical deterioration of certain classes of the population, it is important to bear in mind that a great many causes have been in operation during the last century, some calculated to raise and others to lower the physique of the people. Whether the net result of the plurality of causes at work has been to elevate or to deteriorate the national stamina is a very complex problem. It may well be that some practices intended to increase the resistant power of the body against certain perils have been productive of unforeseen results, and in the long run have contributed to the deterioration of the physique of the nation in unanticipated ways. Among such practices may be the inoculation of the vaccine disease, intended as a protection against the small-pox.

Mr. Herbert Spencer has called attention to this subject in his latest publication, "Facts and Comments." He says: "You cannot change the constitution in relation to one invading agent, and leave it unchanged with regard to all other invading agents," and he asserts that "the assumption that vaccination changes the constitution in relation to small-pox and does not otherwise change it is sheer folly." The same author, in analysing the causes tending to physical degeneracy, in his work, "Education" (page 157, footnote), suggests vaccination as a part cause in the production of constitutional debility. The view is not a new one and has been supported by many medical men and students of sociology. The late Dr. Felix von Niemeyer, Professor of Clinical Medicine in the University of Tübingen, in his clinical lectures on pulmonary consumption (published by New Sydenham Society, page 22)

observed:

"The injurious influence which diseases have on the constitution, and thereby on the tendency to consumption, manifests itself most frequently and in the most lasting manner in earliest infancy. It is fortunate if children escape disease, particularly in the first years of their life, during which by far the most rapid development of the body takes place, and when by favourable or unfavourable external circumstances the foundation is laid, in a great measure, for a strong and robust, or a weak and delicate health. Even vaccination may, by the febrile disturbance preceding the eruption, as well as by that accompanying the suppuration, both of which are never absent, and according to my numerous thermometrical observations sometimes reach a very high degree, considerably weaken, more especially those children who are not very strong, and may leave behind it the germs of a disposition to consumption."

The hitherto unsuspected or unexplained potentialities of vaccination as paving the way for constitutional injury have recently, to some extent, been elucidated by the

researches of Fünck, Pfeiffer, Guarnieri, Wasielewsky, and in this country, Jackson Clarke. These researches indicate that a protozoan is found in the tissue of the vaccinated which presents a close similarity to those found in the constitutional affections of syphilis and in cancers, and the last-named suggests that the development of carcinoma and carcoma may be due to the persistence of protozoan organisms in the tissues even twenty years or more after the original disease has appeared to terminate. (See "Medical Press," 11th March, 1903, "Protozoa and Disease, 1903," by Jackson Clarke.)

In France a relationship between vaccination and

In France a relationship between vaccination and physical degeneration was alleged in a work by M. Carnot, "Essai de Mortalité: comparée avant et depuis l'introduction de la vaccine en France, Autun, 1849. . . . . Analyse de l'influence exercé par la variole, ainsi que par la réaction vaccinale"; Autun, 1851; and "Parallèle de l'état sanitaire de Paris avant et depuis la vaccine"; Revue Medical, 1856; and in the sensational writings of M. Verdé de Lisle, "De la Dégénérescence Physique et Morale de l'Espèce Humaine déterminé par la Vaccine," Paris, 1855.

Apart from allegations of a general nature accusing vaccination of exerting a deleterious influence upon the national physique, there is abundant evidence, of unimpeachable character, of death and of the communication of specific diseases directly arising from the practice. No doubt, efforts have been made to controvert these damaging allegations, and the most notable of these is the work of Sir J. Simon, printed in 1857. He maintained that "against this vast gain (by vaccination) there is no loss to count. Of the various alleged drawbacks to such great advantages the present state of medical know-ledge recognises no single trace." He especially and scornfully rejected the accusation that properly performed vaccination could communicate syphilitic dis-No medical man with a reputation to lose could maintain this view of Sir John Simon's now. abandoned it himself. He has been forced to admit that "it is certain that the vaccine lymph of the syphilitie infant may possibly contain the syphilitic contagion in full vigour, even at moments when the patient, who thus shows himself infective, has not on his own person any outward activity of syphilis." (Quain's Dictionary of Medicine, article "Contagium.") When a witness before the Royal Commission, Sir John was prepared to modify his views of 1857 (Q. 118-122), but his examination on this head was postponed by the Chairman, and though repeated requests were made for his re-appearance, and . also for the examination of his successor, Sir George Buchanan, the just and natural curiosity of the public was never gratified.

The majority of the Commission, however, had no difficulty in recording their opinion on one part of this important question. They state, "It was at one time doubted whether syphilis could result (from vaccination), and it was even confidently asserted that it could not," but that "facts which were, not long after the issue of Mr. Simon's report, brought before the profession, and carefully investigated, made it certain that the negative conclusion which had been arrived at was a mistaken one, and from that time no doubt can have been entertained by any that it is possible to convey syphilis in the act of vaccination." In spite of the impossibility of further doubt upon this question it is a subject for the gravest censure that a pamphlet "revised by the Local Government Board and issued with their sanction," should have been widely distributed down to a very recent period in which it was emphatically maintained that "The fear that a foul disease may be implanted by vaccination is an unfounded one. . . . The alleged injury arising from vaccination is, indeed, disproved by all medical experience." In view of this reckless inaccuracy, published with the sanction of the Local Government Board, the failure of Sir George Buchanan to appear as a witness is the more inexcusable, and judgment must go by default against the value of the testimony of the medical depart-

ment of the Local Government Board. A perusal of the Majority and Minority Reports and of the evidence given before the Royal Commission shows that there is an active controversy as to the injuries that may and in some cases do result from vaccination. Thus the Dissentient Commissioners (par. 185, Dissent Report) say "We are deeply impressed with the sad cases of severe illness, suffering and death which the investigations of medical men appointed by the Commission have after rigid scrutiny failed to disconnect from vaccination."

For the foregoing reasons it is of obvious importance that the influence of vaccination on public health should be considered by a body unbiassed by the supposed neces-

sity of upholding that practice.

London, September 15th, 1903.

Privy Council Office, Whitehall, London, S.W. 9th December, 1904.

SIR,-

#### Physical Deterioration Committee.

With reference to the memorial sent in September last by the National Anti-Vaccination League for the consideration of the Physical Deterioration Committee, I have the honour to inform you that the views therein expressed have received the careful consideration of the Committee.

In view, however, of the fact that an exhaustive inquiry into the whole question of the effects of vaccination was conducted as recently as 1896, by the Royal Commission appointed for the purpose, the Committee do not feel themselves called upon to discuss axioms of public health which are part and parcel of the law of the land.—I am, sir, your obedient servant,

ALMERIC W. FITZ ROY.

Charles Gane, Esq.

The National Anti-Vaccination League,

50, Parliament Street, Westminster, S.W., 19th December, 1903.

SIR,—

# Physical Deterioration Committee.

I am directed by the Council of the National Anti-Vaccination League to convey to you their thanks for your communication of the 9th inst., which has had careful consideration.

I am further desired to express regret that your Committee could not acquiesce in the request to receive evidence as to any effect vaccination may have on the health of the community.

health of the community.

The Council respectfully point out that the Report of the Royal Commission of Vaccination was not unanimous, and there was very pronounced dissent from a minority of the Commissioners.

The Council also urge that the scope of the Committee's inquiry is unduly limited if it excludes the consideration of any question supposed to be protected by the law of the land.

In the matter of vaccination the suggested "axioms of public health" go, in practice, far beyond the law of the

land which enables conscientious objectors to obtain exemption on the ground of their conscientious belief that the operation will be prejudicial to health.

It has also to be remembered that the Departments violate the principle laid down in the Act of 1898 and force vaccination upon those in the service of the State, although the lymph is not guaranteed and is still the subject of experiment. Many large employers of labour follow the example of the Departments in this matter.

The Council, therefore, suggest that it cannot be maintained that compulsion as now practised is now an axiom of public health and part and parcel of the law of the land.

of public health and part and parcel of the law of the land. If, however, the Committee do not see their way to inquire into this subject, I am desired to ask whether it is their intention to publish in full this correspondence so as to indicate to readers of their Blue Book that the subject has been brought to their attention and to show on what grounds it has been excluded.—I am, sir, your obedient servant,

CHARLES GANE.

Hon. Secretary.

Almeric Fitz Roy, Esq., C.V.O., Privy Council Office, Whitehall, S.W.

Privy Council Office.
Whitehall, S.W., 7
20th January, 1904.

SIR,-

#### Physical Deterioration Committee.

Your letter of the 19th ultimo, has been submitted to the above Committee, and I am instructed to inform you that they are quite willing to accede to your request that the correspondence which has taken place between the National Anti-Vaccination League and the Committee shall be published in full.—I am, sir, your obedient servant,

ERNEST H. POOLEY.

Secretary.

The Honorary Secretary,
National Anti-Vaccination League.

The National Anti-Vaccination League,
50, Parliament Street,
Westminster,
London, S.W.,
1st February, 1904.

Almeric Fitz Roy, Esq., U.V.O.

SIR,-

# Physical Deterioration Committee.

I am desired by the Council of this League to thank you for your kind favour of the 20th ult., and for your ready acquiescence in our request to instruct that the memorial and correspondence which has passed between us respecting Physical Deterioration and Vaccination shall be printed in the Blue-book of proceedings.—I am, sir, your obedient servant,

CHARLES GANE,
Hon. Secretary.

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